GLIMPSES OF TAMIL CIVILIZATION

Eighth World Tamil Conference
Revolving Fund Publication

TAMIL UNIVERSITY, THANJAVUR

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FOREWORD

Civilization and Culture are interrelated terms indicating the culmination of human achievements in the various spheres of Literature, Arts, Architecture, Philosophy, Sciences etc. However, a notable difference between Civilization and Culture has been identified by the specialists. According to them, civilization indicates the external manifestation of perfection, as witnessed in the food habits, clothing, construction, agriculture, industry, polity etc., whereas, culture denotes the inner perfection as reflected in the various forms of arts, literature, ethics, aesthetics, education, religion, philosophy, normative behaviour patterns etc..

The culture and civilization of the Tamils take their origin in the Indus Valley civilization which has been regarded by the historians on a par with Sumerian, Egyptian, Babylonian and other ancient civilizations of the world. The Tamils, being the authors of the Indus Valley civilization were spread almost in all parts of India and thus the whole of the country was once populated by the Dravidian race. That is why the language-scientists have classified the homogeneous languages into North Dravidian, Central Dravidian and South Dravidian. Brahui, one of the Cognate languages of the Dravidian family is spoken even now in Baluchistan in the far north. Among the Dravidian languages, Tamil has a very high antiquity and is rich in literature of all varieties. In order to explore the hidden treasures of the various aspects of Tamil culture and civilization, and to interpret them in such a way as to disseminate them in every nook and corner of the globe, and to enrich the language with the knowledge of modern sciences and technology, the Tamil University has been established on 15th September 1981. To provide an effective media for presenting the new thoughts and fresh ideas both in English and Tamil, the quarterly journals with the titles "Tamil Civilization" and "Tamil Kalai" respectively were started in 1983. Scholars working in the various departments of the Tamil University and also in other Universities have contributed many excellent articles in their areas of specialisation to these journals.

The significant articles. already published in the various numbers of the journal **Tamil Civilization** have been collected and classified by our University Professors Dr.S.N.Kandaswamy, Dr.Rm.Sundaram, Dr.P.Arangasamy and Dr.S.Sivakamasundari. They are published under the title **Glimpses of Tamil Civilization** to synchronize with the celebration of the Eighth International Tamil Conference-Seminar being held in the Tamil University Campus from 1.1.1995 to 5.1.1995. The articles on Literature, Grammar, Linguistics, History, Sociology, Fine Arts, Ancient Sciences and Philosophy present some prominent aspects of the concerned disciplines contributing to the collective excellence of Tamilology. I congratulate all the authors for their illuminating articles published in this volume.

The earnest efforts of the Department of Publication under the direct guidance of Thiru R.Subbarayalu, M.Com., M.B.A., Deputy Registrar, in bringing out this volume deserve special mention. I wish the volume be received by all interested in Tamil Studies.

I also appreciate the co-operation of Dr.K.Rengan, Registrar In-charge in this venture.

(Dr. Avvai Natarajan)

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TIRUKKURAḶ AS NATIONAL LITERATURE

S.N. Kandaswamy

Introduction

The main purpose of the present paper is to explore the feasibility of considering Tirukkuṟaḷ, the Tamil classic par excellence, to be the national literature for India. It is hoped that the study and practice of the ethical epigrams embalmed in this immortal classic will certainly ennoble, elevate and improve the mental outlook and expand the inner personality of one and all. Not only to eliminate linguistic animosity and to exterminate parochialism, but also to foster unity in diversity and to nurture harmony and human understanding, such a classic as Tirukkuṟaḷ will really contribute much.

National Symbols

India, having many races, languages, religions and cultures, after independence, has evolved some common symbols to indicate a national homogenity. They are the national flag, national emblem, national anthem, common language, national bird, national animal etc. The leaders of the freedom struggle from the last quarter of the last century upto the middle of this century, after a long deliberation felt the importance of having the national insignia which should be respected and regarded more than one's life.[1] Actually, the national song, "Vande Mataram" (- Hail to my mother land), sung by the great Bengali writer, Bankim Chandra Chatterjee aroused the national fervour in the hearts of the freedom fighters to get united to drive away the foreign aggressors.[2] Similarly, another national song, 'Jana gana Mana Athinayaka' sung by an equally great Bengali poet, Rabindranath Tagore, the nobel laureate appealed to the minds of all Indians to realise their common cultural heritage and to develop national ego to think of India, the Nation more than anything else.

The concept of national insignia is not new or recent one as far as the Indian Tamils are concerned. Dasangam, one of the 96 prabandhas in Tamil bears ample testimony to the ten kinds of national or royal emblems which include the name of the ruler, name of the country and its capital city, river, mountain, mount, army, royal drum, garland and flag. In modern times, some

of them are left out, while some other new items are introduced. However, the fact, that the idea about the essential emblems that go to establish the sovereignty of a nation was not unknown to our ancients, is clearly understood by the creation of Dasanga literature in Tamil.

Nevertheless, the concept of nation, nationalism and nationality has been considered to be a recent phenomena. Hence, before directly proceeding to propose Tirukkuṟaḷ to be the national literature of India, it is important to know something about the aforesaid new political concept.

The Concept of Nation

According to the political thinkers, the concept of nation belongs to the modern world. Before the pre-modern period, people expressed their fidelity and loyalty only to their communities, tribes, feudel chiefs, petty kings and religious orders. Local sense was predominant in them. So, their attachment was at their regional level. They cared more for the established traditions and authorities. It is due to American and French revolutions, the concept of nation attained a final form and shape. The anticolonial movement was also instrumental for the formation of the same concept.

There are many factors responsible for the stabilisation and strengthening of national feeling. These factors include certain common aspects agreeable and acceptable by all quarters of the population, living in the same country. The implementation and unanimous adoption of them would certainly foster the integrity of the nation. Before probing into the common factors that contribute to the unity of the nation, it is essential to know what is meant by nation, nationalism and nationality in general.

First of all, let us consider the definition of nation given by John G.Stoessinger: "In summary, then, what constitutes a nation in our own time may be characterized as follows: First and foremost, it is a *sovereign political unit.* Second, it is a *population* that in being committed to a particular *collective identity* through a common image of past and future, shares a greater or lesser degree of nationalism. And finally, it is a population inhabiting a *definite territory,* acknowledging a *common Government,* and usually -- though not always -- exhibiting common linguistic and cultural patterns."[3]

From the above definition, it is evident that the component parts of a nation are the population, territory, government and sovereignty which are collectively called by almost all the political thinkers to be the essential element of a state, which is synonymous which nation. If the people belong to the homogeneous category forming one race, speaking one language and following one religion as in the case of France, Italy, Greece etc., there is poor chance for

any problem. But, if they happen to be heterogeneous, as in the case of India, America, Canada, South Africa, Malaysia etc., then some extraordinary and effective common forces are needed to bind the people together. These forces should not be physical but something psychical and to accept them, feeling of oneness, large heartedness and mutual understanding are indeed essential. These forces should be due to the manifestations of the central common aspects found among the various sections of the population inhabiting the entire country.

Binding Forces

How to choose the common aspects? Who are the authorised persons to identify such aspects? What will be the response from the different quarters of the same population? These are some of the questions, naturally arising when we think about the common factors for the unity of the nation. When safety and security, liberty and privilege of the people are at stake, either when they are under the yoke of foreign rule as in the Colonial India, or they are ruled by themselves as in Modern India, the political and social leaders should come forward to remind the people about the need and necessity of unity and integrity, being the utmost requisites to guard themselves from such impending danger. They should convince the people about the common traits that fasten them together. With regard to the identification of common conditions, a give and take policy should be evolved. In forming such a policy, even a single state within the nation should not be ignored or neglected. To put it in other words, some common factor from each one of the states should be identified and accepted by the rest, so that, that state would have every pride of having contributed something to the solidarity of the nation. For instance, there are about 21 states in India, and so, at least 21 common aspects should be chosen from each one of them and given national status. Only those, who are basically patriotic, recognising the values of others, and who are ready to give equal treatment to at least one common factor found in a single state, are the most qualified persons for investigating and examining thoroughly the adequacy and appropriateness of the national character of the common forces to be chosen.

After the identification and introduction of the national insignia, let it be language or literature - whatever it may be, every citizen should come forward to recognize and respect the same. After implementation, nobody should raise their voice against it or revolt, questioning of its propriety or validity. Proper orientation should be given, and clear understanding should be developed among the various sections of the people with regard to the realisation of national unity.

Nationalism and Nationality

After having seen something about the concept of nation, a

few words about nationalism and nationality are to be said. For the solidarity of the nation, the sentiment of nationalism, that places the existence and welfare of the nation highest in the rungs of the ladder of political loyalities should be nurtured. It embodies the citizen's thirst to strive hard for the establishment and endurance of the nation against the threats of alien forces in any form. It indicates the groups consciousness of shared history, language, race and values. In order to make the nation a cohesive viable entity, the role of nationalism is significant and dynamic. In this context, it is appropriate to quote Anup Chand Kapur: "Nationalism is a feeling of territorial patriotism or a sense of identification of the individual with the entire people of the land." He is frank to mention the fact that "consciousness of being Indians, as distinct from a Bengali, or a Punjabi or a Maharashtran or a Tamilian, rises to the surface only when activated by a foreign threat or by some external blow to India's national pride. As soon as more or less normal relations are restored the, brief surge of all-India patriotism quickly fades away to be replaced by a renewed consciousness of the importance of those issues which divide Indian from Indian."[4]

From his observation, it is made clear that the sentiment of nationalism should not be a temporal or time serving factor, but it should be a permanent force to bring the divergent elements into an organic whole.

From the writings of the specialists on the subject, it is made clear that nationalism is a psychological force striving always for strengthening the national unity, deriving inspiration and harmonious feeling from the cultural heritage and other common aspects pertaining to that nation.

Nationality naturally refers to the status of a person as subject of a nation. According to John Stuart Mill, a portion of mankind may be said to constitute nationality if they are united among themselves by common sympathies.. which make them co-operate with each other more willingly than with other people, desire to be under the same government, and desire that it should be government by themselves, or a portion of themselves exclusively.[5]

Hence, it goes without saying that nation, nationalism and nationality are interconnected phenomena revolving around the unification of one greater community. With this background, let us proceed to present some of the salient aspects of Tirukkuṟaḷ which are universal, embracing the whole of humanity without any prejudice or bias to any section.

I. The Universal Perspective

Tiruvalluvar lived in the beginning of the Christian era. Though he was born in the Tamil Nadu, his thoughts are not restricted or constricted to that region only. His erudition in Tamil, Sanskrit, Pali and Prakrit and his rich experience of world life enabled

him to collect and select the vital aspects congenial to a healthy and harmonious living. His clarity of thought and brevity of expression made his work more popular. The artistic arrangement of the ethical, political and erotic thoughts in refined language with well chosen words is really superb and thought provoking. His similies and analogies drawn from the natural objects are realistic and instructive.

It is significant to note that there is no mention about Tamil language or the Tamil monarchs in Tirukkuṟaḷ. This omission itself suggests that his work is meant not exclusively to the Tamils, but to the whole of mankind. He addresses directly to the man -- the citizen of the world, transcending the territorial, linguistic and religious barriers. The common values and practical ethics applicable to the day to day life of all, are elucidated in Tirukkuṟaḷ and hence, it has an universal appeal. Such expressions as nilam (land), maanilam (great land), ulakam (world), naalam (earth) and vaiyam (universe) in various couplets in the text, bear testimony to his universal and cosmopolitan outlook. In the chapter on naaṭu, he deals with the characteristic features of a welfare state. What is adumberated in this chapter is not with reference to a particular country, but to any country in the world. Following the footsteps of Kaṉiyaṉ Puuṅkuṉṟanaar, the Sangam poet, who declared that "all countries are ours and all are our kith and kin," Tiruvalluvar proclaims thus:[6]

"How is it that any one can remain without learning, even to his death, when to the learned man every country is his own country, and every town is his own town?"

It is sufficient to quote the following two couplets to understand and appreciate Tiruvalluvar's erudition in the world classics:[7]

1. The folly of desiring the woman who is the property of another man is not found in the world amongst those who have perused the works on ethics and polity.

2. There is no fame for those who have forgetfulness, and this conclusion is upheld by all the world writers on ethics.

If an ethetician wellversed in the ethical literatures of the various countries in the world dives deep into the maxims of Tirukkuṟaḷ, he will be easily convinced that most of the sayings in the Tamil text are in perfect confirmity with the virtues found in the *Book of Dead*, *Precepts of Kagemni*, Precepts of Ptahhetep and Maxims of Ani-all being the products of Egyptian Civilization; with the morals of the Babylonian monarch Hammurabi and with the matured wisdom of the Greek thinkers Socrates, Plato, Aristotle and Epicuras, and also with the ethics of the Sophists and Stoics.

In Tirukkuṟaḷ, one can listen to the echo of Moses and Jesus. There are parallels in this text

with the noble thoughts of Zoraster, Confucius and Tao. The Upanisadic ideas, the Jain and Buddhist virtues are found in many couplets. For further details, the readers are requested to go through the present author's book entitled, "Tirukkuṟaḷ Kuuṟum Uṟutipporuḷ." It is essential to mention that the Islamic Tamil scholars find in Tirukkuṟaḷ sufficient common ideas preached by the prophet Mohamed.

Hence the eclectic nature of Tiruvalluvar and his all embracing world outlook is clearly understood.

The scholars in all the Indian languages have thoroughly analysed and compared the various ethical works with Tirukkuṟaḷ and have unanimously admired the awe-inspiring similarity found among them. In their opinion, Tirukkuṟaḷ occupies a supreme place in the Indian ethical literary history.[8]

After having understood the international outlook of Tiruvalluvar, an attempt is being made to underline his catholicity as revealed in the well-known commentary of Parimēlaḻakar.

II The Catholicity of Tiruvalluvar

Parimēlaḻakar, the greatest among the commentators of Tirukkuṟaḷ, having equal erudition in the well-known literary branches of knowledge, has clearly pointed out the Catholicity of Tiruvalluvar. Because of his intimate and close study of the text, in many places he was able to rightly identify the views of the author. The following are some of the portions in his commentary to substantiate the fact that Tiruvalluvar is comprehensive and collective in presenting the various aspects of virtue.

1. In the commentary on the couplet that deals with the greatness of ascetics, Parimēlaḻakar elucidates the usage panuval, meaning treatise, thus: Since the author has generally used the word, Panuval without any specific reference to any one, it indicates the religious texts of both the homogeneous and heterogeneous schools which totally agree in extolling the glory of the ascetics, who strictly following the rule of conduct, have renounced all desires (for the benefit of humanity).[9]

2. According to the commentator, the couplet 242 reveals that all the conflicting systems of Indian philosophy unanimously approve that compassion is the best means for the acquisition of eternal bliss.

3. He observes that in conformity with the habit of Tiruvalluvar to select the best ideas found in all standard texts and to teach them to all in general, in this couplet he mentions that the head of all virtues which the authors of various texts have summed up, is the partaking of food, shared with others and protecting the manifold creatures through feeding. This virtue is unanimously agreed by all, belonging

to different schools.[10]

4. In the introductory portion of the commentary on the chapter on transience, he has elucidated that the theory of impermanence has been accepted by all the systems of Indian philosophy. Tiruvalluvar has also dealt with the evanescent nature of the empirical objects just to remind the people to adopt the virtuous course to attain the eternal. Here again, it is to be understand that the concept of transience belongs to the national stock of Indian philosophy.[11]

5. The chapter 37 in the text has discussed in detail about the extirpation of desire, as a pre-requisites for the realisation of the Absolute reality. Here again, the commentator has stated that this idea is also common and agreeable to all religions, aspiring for the supreme bliss.[12]

After having noticed the catholicity of the great Tamil ethetician in the light of the commentary of Parimēlaḻakar, let us proceed to find out some more cardinal tenets that place Tirukkuṟaḷ in an exalted position.

III. Pan-Indian Thought

The world renowned Indologists like Max Muller and Dr.S.Radhakrishnan, after examining the common thoughts pervading the whole of Indian literature, came t the conclusion that they belonged not exclusively to a particular region, but to the whole nation. They called them the Pan-Indian thoughts. One of them is the concept of Purusharthas, i.e., the objectives to be attained by everyone to achieve fruition and perfection on earth. One has to choose the right way of life, to adopt righteous means to acquire wealth, and to follow virtuous course to obtain pleasure. Thus purusharthas are threefold, viz., Dharma (aṟam), Artha (poruḷ) and Kama (iṉpam). These three are collectively called Trivarga (muppal). This concept is national in nature, since it has been portrayed not only in the Sanskrit classics, but also in the Tamil works especially in Tirukkuṟaḷ. The Vedic Kalpa Sutras have laid stress on the three ends of life, i.e., righteous conduct (Dharma), acquisition of worldly objects (Artha) and their enjoyment (Kama).[13] The Mimamsakas and others also have endorsed the same view. The Buddhist Amarasimha has mentioned Trivarga in his lexicon. The Jains are no exception to this. The Saivites and Vaishnavites have also elaborately dealt with this concept.

Nevertheless, it is to be noted that in the Sanskrit tradition, there is a division of Dharma Sastra, Artha Sastra and Kaama Sastra separately. But in the Tamil tradition, all the three are put together in in the causal sequence, as evidenced in Tirukkuṟaḷ. There may be some unique features in the treatment of Trivarga in the Tamil classics.

Next, let us see how Tiruvalluvar has been secular while he has indicated the theological and philosophical tenets in his universal ethical treatise.

IV. Common Theological and Philosophical Thoughts

When we say that India is a secular state, it does not mean that it is against religion, but it signifies that it gives equal treatment to all faiths. If this connotation to secularism is tenable, then we can easily establish that Tirukkuṟaḷ is secular, since it contains the rudiments of all systems of Indian theology and philosophy. It is to be born in mind, that Tirukkuṟaḷ is not at all a religious or philosophical book, but it is essentially an ethical treatise. Even then, whenever it is needed, the author has not lagged behind to present some of the basic principles of various systems of thought. To confirm this, a few examples are given hereunder.

The opening chapter is on the praise of God. Tiruvalluvar has not mentioned God by any name. Even the word Bhagavan *in the first couplet is commonly* used to denote any supreme being. The epithets and attributes used *in this* chapter are general and hence applicable to all religions. This tendency is also found when he used the word paṟṟaṟṟaṉ *(350)* in the chapter on renunciation. There, the commentator has ably pointed out that the author has indicated god in general way as he has done in the first chapter.

According to Tiruvalluvar, the Absolute is the embodiment of pure knowledge. He is the all compassionate. He is the First to the world, just like the letter 'A' is to the alphabetical system. By nature he is bereft of all blemishes, free from the defilement of twofold Karmas. He is devoid of desire and aversion. He has no comparison. These ideas about God are really admissible to all theologians.

Tiruvalluvar is cognizant of not only the Vedic systems, viz., Samkhya and Yoga, Nyaya and Vaisesika, Mimamsa and Vedanta, but also the non-Vedic systems viz., Materialism, Jainism and Buddhism,[14] according to the commentator, Parimēlaḻakar.

In this context, when we consider about the national status of Tirukkuṟaḷ, two points require special mentioning. The famous Brahadaranya Upanisadic line, "Satyam eva jayate" (i.e., truth alone will succeed), is found in the National emblem. The elaboration of this saying is found *in the chapter on Vaaymai in Tirukkuṟaḷ*. Dharma cakra is also found in the National insignia. Its counterpart *in Tirukkuṟaḷ is "aṟavaaḻi".*[15] Such similarities are many.

Humanism is the keynote of Tirukkuṟaḷ. Avoidance of slaughtering living beings is strongly advocated in this classic. Vegetarianism is the religion of Tiruvalluvar. He could not tolerate the suffering of the fellow-beings. Removal of hunger is considered to be the best charity: The chapters

on benevolence and giving are sufficient to conclude that Tiruvalluvar's concern has been more with the suppressed and uppressed. His ultimate desire has been to elevate them, fulfilling their basic needs. He condemns begging, but simultaneously he advices the rich to spare their wealth to share with the poor. His boundless compassion goes to that extent as to curse the creater if He has made the people to beg. The altruism of Tiruvalluvar is admirable and appreciable.

After having seen some of the salient common aspects of theology and philosophy, something about the political and economic thoughts enshrined in Tirukkuṟaḷ to earmark its fitness to become the national literature of India should be mentioned.

V. Political and Economic Thoughts

The concept, that a state is made up of seven limbs, belongs to the national stock of Indian polity. So, it can be rightly called a Pan-Indian thought. In the Sutta Piṭaka (500 B.C.), the parinibbana sutta clearly refers to the seven limbs of a state. In the Arthasastra (400 B.C.) an elaborate discussion on the seven angas that constitute a state has been made. According to its author, Kautilya, the king (Svamya), Cabinet (amatya), territory (Janapada), fortress (durga), treasury (Kosa), army (danda) and the friends (mitrani) are the essential ingredients of a state. In conformity with this Indian tradition, the first couplet of Poruṭpāl, the second book in Tirukkuṟaḷ, has enumerated seven limbs and their characteristic features have been thoroughly analysed and properly presented in all the 70 chapters of Poruṭpāl which forms the biggest portion in the treatise. It shows the importance given by the author to the concept of polity.

Some may say that in the enumeration of the above elements, there is no mention about citizenship which occupies a prominent place in Tirukkuṟaḷ. It is to be considered that Kautilya while mentioning janapada, clearly has indicated the territory fit to be inhabited by the people. Despite the minor differences both in the content and treatment between the two texts under reference, the areas of common interest are many. Here, in this article we do not indulge in a comparative study of the two works.

It is to be stated that the contents of Poruṭpāl are mainly meant for those who have actively engaged in the political and social life, though many of them are found suitable for the individual or personal life. Since politics and economics are inter-connected, a line of demarcation between them is not drawn in the text. A brief outline about each one of the essential elements of a state is being made hereunder, just to point out Tiruvalluvar's political wisdom which has been unanimously acclaimed by our national leaders and political thinkers.

The Head of the State

Since monarchy was the only known form of government in our country upto the dawn of independence, Tiruvalluvar places the king to be the head of the state. In 25 chapters, he deals with the traits and talents of a benevolent ruler, and they are equally applicable to the head of any form of government.

The ruler should be powerful, learned, brave, vigilant and munificent. He should not swerve from virtuous course but be abstinent from vicious path. He must be easily accessible and should not use harsh words. He should bear the words that embitter his ears. He must be impartial and render justice. He should find out the manifold sources of income and accumulate wealth and preserve them, so that they would be properly distributed for the welfare of the state.

He is required to seek the guidance of the great who have rich experience and ripe wisdom. He should listen even to their censuring words. On any account he should not be in the company of the mean and low minded persons. He has to employ faithful spies who are the eyes of the kings. With regard to the discharge of the political obligations, he should have the discriminating knowledge to weigh the pros and cons. of every action. He should also weigh the power of the action at hand, his own strength, his enemy's strength, and the power of the friends of both the parties. Similarly, he is to know the proper time and right place for executing an action successfully against the enemy. He should devote sufficient attention in selecting the right persons to serve the government. Merit alone is the criteria to assign various jobs to the employees.

The ruler should not be a tyrant or a terrorist. He must be benign and compassionate.

The aforesaid features that constitute the leadership deserve universal acceptance.[16]

Next, let us pass on to point out the significance of the cabinet in the governance of the state.

The Cabinet

The qualities and activities of the ministers are elaborately dealt with in 10 chapters.[17] The minister should possess natural acuteness and wide learning. He should excel in having firmness while discharging duties, protecting the citizens, having erudition in the political and ethical treatises with the rational thinking and perseverance, When he embarks on a mission, he must be capable of making an excellent choice of means which include army and revenue, proper time the manner of execution and the rare ventures to be undertaken. He must be capable of making divisions among the rival groups, to maintain the goodwill of the allies and to restore friendship

with those who have severed from him. Even though the ruler is ignorant, it is the duty of the minister to offer him sound advice to correct him. He must be a good speaker. The power of speech, undaunted attitude and fearlessness are the possession of the minister who could not be conquered by any one, in any intrigue. He should be resolute and manifest purity in action.

The minister has also occasions to be endowed with the role of an envoy. Hence a whole chapter is devoted to deal with the requirements of an ambassador. He must have a good heridity, affection and the sterling qualities that please the head of the state. He must be a knowledgeable person of his affairs. He must be endowed with the power of speech, marked by forcible expression. He should have a bearing personality. He must be undaunted and prepared to give up even his life for the sake of his country.

The relationship of the ruler and the cabinet is also indicated in Tirukkuṟaḷ. The ministers or the government officers should not move with the ruler very closely or abstain from him very widely. They should behave just like the people who warm themselves at the fire, i.e., they should be neither too far nor too near, so that they could get the warm treatment.[18]

The next element is the territory for which the author has devoted one chapter.[19]

The Territory

Tiruvalluvar aims at the formation of a welfare state. So, he envisages the factors to be positively present and also mentions the detestable things to be rooted out. According to him, the land should be fertile yielding rich harvest and possessing the virtuous and the rich people living together. It should be devoid of excessive hunger, irremovable diseases and destructive forces. In order to exterminate hunger, there is a chapter in this great work dealing with the significance, of ploughing,[20] and to extinguish disease one chapter on medicine[21] and to eradicate the enemies there are two chapters on the efficiency and excellence of defence forces.[22]

Let us examine the remaining essentials of State.

The Remaining Elements

Fortification is one among the essentials of a state.[23] A country should be strongly fortified just to repulse the invaders and aggressors. Wealth is also considered to be a great strength, which should be accumulated through proper means.[24] The king should levy taxes with mercy and love. The unclaimed wealth, revenue acquired through customs and other kinds of taxes and the booties are the wealth enriching the treasury. Sound finance is a mighty force to the nation and hence it is ranked with fortifi-

cation. Tiruvalluvar encourages to accumulate wealth, because there is no sharper weapon than it, to quell down the arrogance and pride of the enemies.

Having given sufficient attention to revenue, the moral philosopher is also very keen on the budget of the government. It is often said that the Ex-finance Minister of the Central Cabinet Dr.C.D. Deshmuk while presenting the budget in the parliament, used to quote the following Tirukkuṟaḷ:[25]

"ஆகா றளவிட்டி தாயினும் கேடில்லை
போகா றகலாக் கடை".

It means that there is no harm even if the income source is very short, if the limit of expenditure does not increase. This should be the watch word for the persons engaged in the administration of the country.

The text also deals with the qualification of the army men. The valour, courage, honour, loyalty, trustworthiness and duty-consciousness are the requisites of the army men. It is essential to point out that the warrior is really valourous, if he showed mercy and offered first aid to the disabled soldiers of the rival camp.[26] This sort of humanism even in the war front bears testimony to the compassionate character of the Tamils of the period of Tiruvalluvar.

There are 17 chapters dealing with allies.[27] Herein, the political philosopher defines friendship both in positive and negative terms. The merits of sincere friends and the folly of evil companions are categorically stated. Internal enemity is to be feared and rooted out. The noble and great persons should not be offended, instead they should be respected and regarded.

In the welfare state as visualised by Tiruvalluvar, there is no place for prostitution, consuming intoxicating drinks and gambling.

In the last 13 chapters in Poruṭpāl, the merits and demerits of a citizen are vividly portrayed.[28] Since the ministers and other officials are hailing from the citizens, the moral philosopher has given due importance to this section. It is significant to state that he clearly mentions about social equality. According to him, everybody is born equal but they differ according to the difference in their activities.[29] Nobility, self respect, greatness, perfectness, goodness of character, senstiveness to shame, truthfulness, etc., are the chief characteristics of an ideal citizen.

Ploughing is given a pride of place. Since cultivation remains to be the back bone of India, the glorification of ploughing holds good for ever.[30] There is a reference to absentee-landlordism in the chapter under reference, and it is to be removed according to the author. The various processes involving agriculture are also mentioned.

In the welfare state, Tiruvalluvar feels that there should be no place for poverty and mendicancy. They are to be wiped out at any cost. The chapter on meaness discloses the various types of low people. The extremely mean-minded people are those, who would not even shake their hands (thinking that the clinging morsel would go to some one) would give only to those, who would break their jaws with their clenched fists, thus indicating the resolute mind of Tiruvalluvar to eradicate the social and economic upheavals, even by force.[31]

Conclusion

To conclude, what Tirukkuṟaḷ has said about the essentials of a state are still applicable to a larger extent to the modern political set up of India. Even the new ideas and fresh thoughts, due to the changes and developments taken place during the passage of time, would be drawn by the implied language of the text. Nevertheless, it is enough if we consider that in Tirukkuṟaḷ there are ample and adequate ideas applicable to modern India.

Attesting the national and also the international status of the Tamil classic, many Indologists and scholars have expressed their views in unequivocal terms. It is again to be remembered that Tirukkuṟaḷ is the only secular literature that has been translated in more languages both Indian and foreign. In this regard, a recent publication, worth commendable, has furnished the maximum materials to support the proposition that Tirukkuṟaḷ richly deserves to be accepted as the National Literature of India.[32] However, the present author would like to quote a portion of the memorable lecture of the internationally reputed philosopher and Ex-President of India Dr.S.Radhakrishnan, while unveiling the statue of Tiruvalluvar at Mylapore in June, 1966, not because it has not been included in the above mentioned book, but because it serves our purpose:

"Tiruvalluvar has spoken to us as a man who has spiritualised himself.... If you remember his sayings and precepts and practise them, this country will be much greater than what it is today, and you will be able to give something of value to other countries also. There is no doubt about it ..... People belonging to different religions had claimed in this work the echoes of the deepest faith of their religions.[33]

NOTES

1. Prabodh Chandra Sen, *India's National Anthem*, Visvabharati, Calcutta, 1972. pp. 37-8.

2. *Ibid*. p.27.

3. John G.Stoessinger, *The Might*

of Nations, New York, 1969, p.15.

4. Anup Chand Kapur, *The Indian Political System*, S.Chand & Co., New Delhi, 1982, p.64, p.4.

5. International *Encyclopaedia of the Social Sciences*, Vol.II, Macmillan Company, London, p.8.

6. *Tirukkural*, 397 The translations of Rev.W.H.Drew and Rev. John Lazarus.

7. *Ibid.* 141, 533.

8. First All India Tirukkural Research Seminar papers, University of Madras, Madras, 1973.

9. *Tirukkural*, 21.

10. *Ibid.* 322.

11. *Ibid.* Chapter, 34.

12. *Ibid.* 361.

13. Dr.Ram Gopal, *India of Vedic Kalpa Sutras*, New Delhi, P.viii, p.482.

14. Dr.S.N.Kandaswamy, *Tirukkural kuurum Urutipporul*, Manivasagar Nuulakam, Chidambaram, 1977, pp.38-67.

15. *Tirukkural*, 8.

16. *Ibid.* Chapters, 39-63.

17. *Ibid.* p. 64-73.

18. *Ibid.* p.691.

19. *Ibid.* Chapter 74.

20. *Ibid.* Chapter 104.

21. *Ibid.* Chapter 95.

22. *Ibid.* 77 & 78.

23. *Ibid.* 75.

24. *Ibid.* 76

25. *Ibid.* 478.

26. *Ibid.* 773.

27. *Ibid.* Chapters 79-95.

28. *Ibid.* 96-108.

29. *Ibid.* 972.

30. *Ibid.* 1039.

31. *Ibid.* 1077.

32. *Tributes and Translations*, Edited by Thiru M.A.Manickavelu & Dr.K.D.Thirunavukkarasu, Maniyagam Publications, Madras-600 085., Dec. 1986.

33. The Indian Express, 3rd June, 1966.

SHAKESPEARE IN TAMIL VERSE

Palany. Arangasamy

Imaginative originality, expressive power and creative genius make Shakespeare a great writer. Shri. Aurobindo puts him on par with Valmiki, Vyasa and Homer in respect of creative talent and poetic excellence.[1] David Daiches observes that Shakespeare was a great poet as well as a great dramatist and it is the combination of these two skills that gives his plays their extra-ordinary power and richness.[2]

In the history of Shakespeare translation in Tamil, seldom attempts have been made to render the English playwright into verse[3] even though the scholarly opinion, in general favours prose rendering, as it is in the case of the modern translations of Homer.[4] Practically speaking, the task of rendering poetry into poetry from one language into another is too rigid a condition to be observed.[5] Moreover a poet rendering another poet in verse-form may not be faithful to the original as his own visionary power may interfere with the process of translation to the extent of creating a new work. However this did not prevent Vaduvoor Duraisamy Iyengar and Kallapiran Pillai from rendering *King Lear* and *Merchant of Venice* respectively. Surprisingly both these scholars were not poets. The first one was a novelist and the other was a Government officer and both had not written poetry previously.

Vaduvoor Duraisamy Iyengar, popularly known as a writer of detectvie fiction adapted *King Lear* changing the title into Mangayar Pakattu (1916), literally the hypocrisy of women, a reference to the treachery of Goneril and Regan. Though Iyengar started his career as a clerk in the service of the British Indian Government, he made use of his leisure to turn *King Lear* into verse with Tamil akaval metre, roughly equivalent to the English blank verse. Kallapiran Pillai translated the *Merchant of Venice* - Venice Vartakan (1932) partly in prose and partly in verse, strictly following Shakespeare.

Iyengar's Tamil version has undergone a few changes, both structural and textual. He has Tamilized the dramatis personae of *King Lear*, as many of the Shakespeare translators have already done. His version is a closet drama, meant for reading and not for theatrical enactment.

Duraisamy Iyengar's adaptation of *King Lear* has a happy ending[6] unlike the original which ends like a Senecan play with five major characters dead and one tortuously blinded. At the close of Tamil version, King lear is restored to sound health and is miraculously cured of his insanity. Iyengar, the adapter has not given any reason why he resorted to major deviation from the original in the last act. But still, reasons for the deviation could rightly be inferred.

The cruel murder of benevolent Cordelia and the death of innocent King Lear would have been obnoxious to an audience that believed in traditional values and ethical principles. Lear's sufferings have been so cruel and our indignation against those who inflicted them has been so intense", as A.C.Bradley observes.[7] These reasons might have emboldened Iyengar to deviate from Shakespeare's version of King Lear.

Iyengar may have been aware of almost the same opinion held by scholars and critics in England. Samuel Johnson has said that the conclusion of the play is contrary to the natural ideas of justice.[8] He has also quoted his friend Warton as saying that the instances of cruelty are too savage and shocking.

To Swinburne, the 19th Century English poet, there was no justice in King Lear. A.C. Bradley has observed that more on principles of dramatic perfection than on sentiment, King Lear and Cordelia must have been saved.[9]

Nahum Tate's version of King Lear[10] may have also inspired the Iyengar to deviate from the original. It may not be far from truth to assume that Iyengar may have had access to Tate's version. This too does not mean that he has solely depended on Nahum Tate for there are differences as well as similarities between Tate and Iyengar in the portrayal of major characters. In Tate's version, Edgar assumes the role of Cordelia's lover and marries her. In the Tamil version, Cordelia remains a woman of immaculate virtue with absolute fidelity to her husband. She resembles an ideal Indian woman of cherishable qualities with genuine affection towards her father and sincere love and loyalty towards her husband. Edgar merely becomes a minister in Iyengar's version. Similarities in both the versions of Tate and Iyengar consist in Cordelia becoming the Queen and King Lear surviving and not suffering. This serves as an evidence that Iyengar was not guided by Tate, even if he has

gone through it.

Other changes that Iyengar has effected into are in character portrayals. The villainous Edmund, on the eve of his death does not speak confessingly but briefly whispers, "Some good I mean to do, despite of mine own nature." In the Tamil version, Kesavan (Edmund) voluntarily confesses in thirtyone lines how he had been evil-minded and greedy. With a deep sense of penitence, he begs mercy prays for clemency and dies. His dying declaration with an essential moral content would have made a tremendous impact on the conservative audience, had this play been enacted.

Moreover, Iyengar makes the counterparts of Cordelia, Edmund and Albany as his mouthpieces, speaks highly of the merits of ethical life and upholds natural justice, another moral twist which would have captured the hearts of the Indian readers.

Unlike the last scene of the original where King Lear is fainting to death, in the adaptation the good old King lies in cosy bed, calmly attended to by his youngest daughter. She is gently massaging the feet of her father and he wakes up to apologize to her for his erstwhile erratic behaviour. She stands up politely and talks to him that it is her bounden duty as a daughter to attend to him. This is a picture which one can visualize even to-day in an average Tamil home symbolizing the great esteem in which parents are held.

Omissions from the original include the storm scene and a few passages of the Earl of Kent which do not promote dramatic action. The dramatic spectacle of an old man facing the fury of nature and breaking down mentally would have proved too much for the readers not accustomed to seeing violence and that too on a benevolent character. However, the sporadic omission of passages and part of the scenes have not spoiled the even tenor of the adaptation.

The style of the adaptation is readable because of words and phrases that flow without much effort or strain. Literary echoes, not entirely conscious from Tirukkural, Cilappatikaram and Hymns of Pattinathar exemplify the translator's closeness and familiarity with Tamil literature.

Iyengar's adaptation may not have been very much popular as it is evidenced by the fact that there is a gap of nineteen years between the first and the second editions.[11] Iyengar did not subject himself to a "mass hypnosis of uncritical veneration of Shakespeare." He is unique in boldly deviating from the English playwright and giving a fitting finale to the Tamil version in consonance with the contemporary cultural background.

Kallapiran pillai, a Revenue official in the Madras Province under the British rule has made a Tamil rendering of the *Merchant of Venice*. Except in a very few places, the rendering closely follows the original. In exposing a playwright in toto to alien readers, without resorting to digressions, localizations and omissions, the problems that hamper the understanding of the play are not only the stylistic devices such as pun, equivocation, satire, irony and allusion but also the cultural incompatibility and untranslatability. The only solution to all these is an effective use of footnotes. Among the translators of the first two decades of the present century, Kallapiran Pillai may be said to have resorted to the maximum use of footnotes. Mythological and classical references are neither localized nor transformed but included in the Tamilized form as they were in the original.

The malapropism of Launcelot[12] in uttering 'reproach' instead of 'approach' is fittingly rendered by Pillai by making Launcelot use a similar two-syllable Tamil word 'Vasavai' (to scold) instead of 'Varavai' (to come). To those who are not familiar with malapropism in Tamil, the footnote explains that as "Launcelot is comical by nature, he deliberately uses the word 'vasavai' instead of 'varavai.' Thus the footnotes come in handy to the translator to maintain a balance between the warranty of the original and acceptability of the translation.

Certain passages that contain obscene references may be prohibitive for a Tamil translator who deals with an essentially conservative readership. A few references Pillai omits because he has no means of covering the vulgarity of certain passages. But where an obscene word is a pun, he promptly seizes the plain meaning and keeps his readers in ignorance of the hidden meaning and of Shakespeare's capacity to crack vulgar jokes to please his groundlings. Let us see an example:

A passage whose Gratiano addresses Nerissa contains a coarse and vulgar joke.

> Well, do you so, let me not
> take him then
> For if I do, I will mar
> the young clerk's pen
>
> V-I-234

He says that "he will spoil the young clerk's attractiveness to women by castrating him, using the word 'pen' deliberately to suggest 'penis' if he catches him with Nerissa. In the Tamil rendering Gratiano speaks as follows:" Well, you do so, but let me not see him, still, if he is found by me, I will deprive him of his profession." Needless to say that the suggestive meaning of the word 'pen' is suppressed.

When Pillai himself is not able to tone down a passage, he

omits it outright.

Nerissa: And pardon me,
my gentle Gratiano
For that same scrubbed
boy, The doctor's clerk
In lieu of this, last night
did lie with me'
V-1-260

Even a low-bred woman character would never speak like this in India, more so in Tamil Nadu and hence the omission. In a place where the word 'cuckold' is used, Pillai has resorted to omission. The word 'cuckold' has no equivalent in Tamil. Historically speaking, the Tamil society was an essentially patriarchal which did not tolerate any sexual deviation on the part of a married woman, thus creating no opportunity for its male members to coin a term equivalent to 'cuckold.'

Pillai has not swerved from the original in respect of plot, characterization and similar features anywhere in the text. No character is either omitted or added. He has not localized the dramatis personae as many of his previous translators have done.

However sincere is the attempt to render the play in verse, it cannot be said that the poetry and the songs are smooth flowing. The entire translation seems to have been the result of a heavy and strained effort for almost all the poetical lines are disjointed to cope with the prosodic perfectness. The rendering is tough with sporadic use of obsolete and unfamiliar words. But still, it can fairly be said that the rendering is of a high standard and seems to have been written with an eye on scholars and intellectuals.

NOTES

1. Quoted by K.D.Sethna in *Sri Aurobindo on Shakespeare* (Pondicherry: Sri Aurobindo Ashram, 1965), p.8.

2. David Daiches, 'Shakespeare's Poetry *The Living Shakespeare,* Robert Gittings ed. (London: Heinemann, 1967).

3. Stopford Brooke is sceptical about verse translations when he says that 'Translations of Poetry are never much good but at least they should always endeavour to have the musical movement of poetry and to obey the laws of the verse they translate." Quoted by R.C. Dutt in his introduction to the Great Epics of Ancient India (Delhi Ess Ess Publication, Delhi-52)

4. Horst Frenz, The Art of Translation in *Comparative Literature: Method and Perspective* ed. N.P.Stalknecht and H.Frenz (Southern Illinois University) P.112.

5. Vide: On Translating Ghalib in Indian Literature Vol.2, No.1 (1975) New Delhi: Sahitya Academy.

6. Jean Francois Ducis composed a verse Hamlet (1769) with a happy ending; King Lear too. Vide Ruby Cohn's Modern Shakespeare. Offshoots (New Jersey: Princeton University Press, 1976) .p.10

7. A.C.Bradley, Shakespearean Tragedy (London: Macmillan 1974) p.231

8. Quoted by Frank Kermode in his *Introduction to King Lear*, Case Book Series, Macmillan, 1978.

9. Ibid., p.14

10. Nahum Tate amended King Lear in 1681. Many actors declared their preference for Tate over Shakespeare. Tate's Lear held the London Stage for 157 years. See Modern Shakespeare Offshoots, p.236.

11. The first edition of Mankayar Pakattu was published in 1917; the second edition in 1936. See the Introductory remarks by Selvakesavaraya Mudaliyar (Madras: M.S.Ramulu Company, 1936) p.iii

12. Merchant of Venice II, V 20.

A CONTRASTIVE STUDY OF BHAKTHI LITERATURE OF PANDYA AND CHOLA KINGDOMS

A. Veluppillai

Though Tamilnadu was united by language, it was disunited politically for a long time. The ancients were not pointing out any era when the whole of Tamilnadu formed one kingdom or state. The tripartite division into the Chera, the Chola and the Pandya kingdoms existed for a very long time. The west coast of strip of the Chera kingdom evolved into the Malayalam speaking Kerala State. The Chola and the Pandya Kingdoms now form parts of the present day Tamilnadu State. From about the Imperial Age of the Cholas, these two kingdoms were unable to preserve their separate existence within their former boundaries.

Before the commencement of the Imperial Age of the Cholas, the Pallava kingdom and the Pandya kingdom filled the entire present day Tamilnadu. The Pandya kingdom in the Far South was ruled by the Pandyas. The Pallavas whose main base was Tondaimandalam also controlled Cholamandalam and Kongumandalam. The history of Tamilnadu during the pre-Pallava Kalabhra Interregnum is still dark. Still there is enough evidence to indicate that most of Post-Sangam literature was produced in and around Madura in the Pandya kingdom. There is a strong tradition that the Sangam literature owed its recognition and preservation to Madura.

The last phase of the Post-Sangam period and the Pallava period constitute the Bhakthi era in the History of Tamil Literature. First, we can take the poetesses of the Bhakthi era. Kāraikkāl Ammaiyār was a Saivite lady of the Chola kingdom. Āṇṭāḷ was a Vaiṣṇavite lady of the Pandya kingdom. Curiously, each of them composed a few verses only. But both of them have impressed themselves as great poetesses. As far as the reach of our present History, Kāraikkāl Ammaiyār is the most ancient Tamil Saivite poetess. The Tamil poetesses, who lived before her, have not identified themselves as Saivites. According to some scholars, no other language in the world has the same extent of excellent Bhakthi literature, as found in Tamil. Ammaiyār was the pioneer in form and

content to Tamil Bhakthi literature.

Āṇṭāḷ's poems were unique as she was in love with God Krishna. There is a lot of naturalness and emotional fervour when a poetess Postulate herself as a lady in love rather than when poets imagine themselves as ladies in love. The impressive success of Āṇṭāḷ in making excellent use of Akam tradition may also be due to the fact of her being an inhabitant of the Pandya kingdom. It should be noted here that Māṇikkavācakar and Nammalvār of the Pandya kingdom have made wonderful use of the Akam tradition in their Bhakthi poetry and the Saivites and the Vaiṣṇavites respectively extol them.

The trio who composed the Dēvāram in Tamil (hereafter referred to as the trio) belonged to Cholamandalam and Nadunadu (also known Tirumunaippadi nadu). The latter territory can be considered a part of the Chola kingdom. Though each of the trio have made use of Akam tradition, they have used it very sparingly. Their entire literary effort consisted of making pilgrimages to Saiva shrines and composing decades over them. All three of them have made extensive use of the eight heroic deeds of Lord Siva, as depicted in Linga Puranā. To make these deeds more appealing to the masses, the process of localization set in and each of the eight heroic deeds is said to have occurred in a particular Saiva shrine. These shrines were scattered through out the Chola kingdom which thus became a Holy Land. Even though Campantar converted the Pandya king to Saivism, he came to Madura on the invitation of the Pandya queen who was a Chola princess. Appar and Cuntarar have made pilgrimage in the Pandya kingdom. But when it is noticed that the trio had visited fourteen shriness only in the Pandya kingdom, it can be surmised that their influence was not very deep.

Māṇikkavācakar has used very sparingly the eight heroic deeds and other Purāṇic tales, extensively used by the trio; he is making use of many new Purāṇic tales, not used by the trio. Most of these tales have been treated in detail in later Tiruviḷaiyāṭaṟ Purāṇams (Purāṇa works dealing with Sacred Plays of Lord Siva) or Hālāsya Mahātmya. These works deal with miracles performed by Lord Siva in Madura and the surrounding Pandya kingdom. Unlike the Dēvāram trio, Māṇikkavācakar didn't embark on extensive pilgrimages to various shrines and to compose decads over those shrines. Even though he had gone to a few selected shrines in the Chola kingdom and to Tirukkaḻukkuṉṟam in Tondaimandalam, he had not displayed keen interest in those shrines; his concern for and interest in the Pandya kingdom had been displayed very clearly; his vivid memories of Tirupperuntuṟai and Tiruvuttarakōcamaṅkai, two Saivite Shrines in the Pandya kingdom came to the fore again and again irrespective of which shrine he visited. He had praised Lord Siva as a Pandya king in

his Pāṉṭippatikam (a decad on the Pandya). His reference to Lord Siva as teṉpāṉṭināṭṭāṉ in Siva Purāṇam should be interpreted as the ruler of Pandya kingdom in the South. There is a territorial division called Ten Pāṉṭināṭu which covers roughly the present day Thirunelvely Kattapomman District and V.O.Chidambaranar District. Māṇikkavācakar could not be referring to this territorial division as Thiruvadavur, his birth place and Tirupperunturai and Tiruvuttarakōcamaṅkai, the two shrines which he fondly remembered lie outside the narrow territorial division referred to.

Māṇikkavācakar, Āṇṭāl and Nammāḻvār have made brilliant mixtures of religious thoughts and Akam tradition and composed devotional poetry. As the Pandya kingdom under the rule of the indigenous Tamil Pandya kings nurtured the Akam tradition of the Sangam Period, the Bhakthi literature originating from there have an individuality of their own. The Pandyas have often been designated as the Pancavar. Though there is some controversy on the connotation of this designation, one of the connotations is that the Pandya was the lord of the five lands. It is on the basis of the five-fold classification of land that five sub-divisions of Akam and five sub-divisions of Puram have been formulated. There is clear evidence that many works dealing with this five-fold classification (among the Eighteen Minor Works) have been composed by poets of the Pandya kingdom. The five-fold classification in these works relate an Akam phase to land such as mullai. The story narrated about the composition of Kaḷaviyal or Iraiyaṉār Akapporuḷ and its commentary illustrates the manner in which Akam traditions was held in high esteem in the Pandya country. At one time, Tolkāppiyam Poruḷatikāram was lost (was not traceable) in the Pandya country. It is Lord Siva who is said to have removed the great worry of the Pandya king and the Poets. Lord Siva himself is said to be the author of Kaḷaviyal. This work was discovered within the inner premises of the famous Madura Siva temple. Some deductions can be made from this story. The Pandya kingdom accepted that Kaḷaviyal (the treatise on furtive or secret love) as the core of the extensive Poruḷatikāram, as found in Tolkāppiyam. Kaḷaviyal has been proclaimed as the tradition, founded by Lord Siva of the Southern Kingdom. The situation of considering the Tamil Tradition as Akam tradition, especially Kaḷaviyal tradition came into being in the Pandya Kingdom. Many modern scholars feel that Kaḷaviyal was composed during the early Pallava Period. Māṇikkavācakar, Āṇṭaḷ and Nammāḻvār seem to have belonged to the later Pallava Period.

This association of the Pandya kingdom with the Tamil Tradition led to another interesting development. Periyāḻvār, Āṇṭāḷ's father, imagined himself as Yacōtai, the young Krishna's foster mother and composed remarkable Bhakthi

poetry. His poetry is just known as Periyālvār Tirumoli, 'the Sacred utterances of Periyālvār'. But this work served as a precursor for Pillaittamil a new literary genre to eulogize the childhood of god, kings and other great persons. This literary genre was referred to as Pillaippāttu 'Song of the childhood' in some early pāttiyal works. The designation 'Pillaittamil' has later completely replaced 'Pillaippāttu'.

There are some scholars who argue that the fact that Māṇikkavācakar composed Siva Purāṇa, kīrttittiruvakaval, tiruvaṇṭappakuti and pōrrittiruvakval in akaval metre shows that the author preceded the Dēvāram trio who have used later metrical forms. This fact by itself cannot be an argument because Māṇikkavācakar had used the later metrical forms also. The akaval was the main metrical form of the Sangam Period as the veṇpā was the main metrical form of the Post-Sangam Period. Kāraikkāl Ammaiyār who used veṇpā in his Atputat Tiruvantāti, found this metre very stiff, diluted this to develop Kattalaikkalitturai to experiment in her Tiruvirattai maṇimālai and developed viruttam to introduce patikam form in Bhakthi poetry. The Dēvāram trio and some of Ālvārs followed in her footsteps. The Pandya Kingdom, on the other hand, was nurturing the Tolkāppiyam Tamil tradition. The Pandya kingdom, as the home of the main Akam tradition, must also have been cultivating the akaval metre, so closely associated with that tradition. The akaval metre reaches its highest point of development in Maṇimēkalai, composed by Cīttalai Cāttaṉār, a grain merchant from Madura. According to modern scholars like Professor K.A.Nilakanda Sastri, Maṇimēkalai belongs to sixth century A.D. As kāraikkāl Ammaiyār was experimenting with Veṇpa and Kattalaik kalitturai so Māṇikkavācakar, too can be said to have experimented with akaval for his Bhakthi poetry.

The designation 'patikam' has been stretched in its meaning to include each of all the fifty one sections in Māṇikkavācakar's Tiruvācakam. May be that Māṇikkavācakar didn't very much like the use of the title 'patikam'. The sections of Tiruvācakam have verses from one to a hundred. Though Māṇikkavācakar had composed a number of decads of verses, he had designated them as patikam only in a few cases like Accōppatikam, Eṇṇappatikam, Tirukkalukkunrappatikam, Kōyil tiruppatikam, Kōyil mūtta tiruppatikam and Tiruppantippatikam. He has used a new title pattu 'ten' as in Accappattu and Ataikkalappattu for about twenty decads which he composed. The use of pattu for patikam was probably a peculiarity of the Pandya kingdom. The extension of meaning of the word pattu to include a hundred verses also may be a peculiarity of the Pandya kingdom. Nammālvār who composed his Tiruvāymoli in a thousand verses, had divided his work into ten equal sections and had named each of these sections as a pāttu.

It is a long standing question whether Māṇikkavācakar, the author of Tiruvācakam, could have been the author of Tirukkōvaiyār also. Both these works have been accepted as portions of the eighth Saiva Tirumuṟai. According to the explanation of Tiruvātavūraṭikaḷ Purānam, Māṇikkavācakar composed Tirukkōvaiyār on a request from Lord Siva. Many attempts have been made to explain how Tirukkōvaiyār dealing with Akam tradition can form a portion of Saiva Tirumuṟai literature. Refusing to accept the obvious fact that Lord Siva was only the Pāṭṭuṭaittalaivar (hero of the poem), attempts have been made to interpret the whole text as dealing with love between God and soul to help in the liberation of the latter. A verse came into being, showing an accusing finger at those who speak the truth regarding this work as those foolishly bent on enjoying worldly pleasures. The basis for the distorted view was the failure to understand properly the literary tradition of the Pandya kingdom.

According to the tradition recorded in the commentary of Kaḷaviyal itself, the commentary was put to writing in the seventh generation only. Verses from Pāṇṭikkōvai illustrate the themes of Akam tradition in that work. The entire verses of Pāṇṭikkōvai are not available now. But a major portion of that work has been culled out and collected. It is not clear whether that work extols one Pandya ruler or the entire Pandya dynasty. The value of the commentary on Kaḷaviyal has been raised very high in Purānic style. There were various commentaries and the now available commentary was adjudged the best, acting on the guidance of Lord Siva. There is no controversy on the fact that Pāṇṭikkōvai preceded Tirukkōvai. No evidence about any other early kōvai is available. So, Pāṇṭikkōvai is probably the first work of its kind. This work on the Pandya must have been composed in the Pandya kingdom. Even a cursory comparison of the verses on various themes in Pāṇṭikkōvai and Tirukkōvai shows that the verses in the latter work were modelled on those of the former. The main difference between the two works is that Māṇikkavācakar introduced Lord Nadarajah and his attributes wherever the Pandya and his attributes occurred in Pāṇṭikkōvai. The overwhelming influence of the literary tradition of the Pandya Kingdom prompted Māṇikkavācakar to take upon the Kōvai literary form. He refashioned it to make it acceptable to the Bhakthi tradition.

Like the Vedic school and the the Saivāgama school which have been associated with Lord Siva, the Pandya kingdom alone associated him with Kaḷaviyal school. The idea, that the Vedas were revealed by Lord Siva, was propogated at least since Campantar and Appar. Though Cuntarar has mentioned the Āgamas, it was Māṇikkavācakar who first mentioned that the Āgamas were taught by him. As the idea that Lord Siva composed Kaḷaviyal

was prevalent in the Pandya kingdom, Māṇikkavācakar probably felt that all the three schools are equally praisworthy. While Sanskrit was the vehicle of expression for both the Vedas and the Āgamas, Tamil was the vehicle of expression for Kaḷaviyal. So, Kaḷaviyal might have been designated Tamil and then by extension, Akam tradition might have been similarly designated.

It is remarkable that both early authors of Bhakthi poetry on Pāvai fast -- Māṇikkavācakar and Āṇṭāl -- hail from the Pandya kingdom. It is very probable that the Pāvai fast was at one time peculiar to the Pandya Kingdom. The biography of Māṇikkavācakar is not very definitive and considerably different versions are available in different works. There is some controversy on where he composed the Tiruvempāvai. Tirupperunturai and Tiruvaṇṇāmalai have been cited in different versions as the site where the work was composed. It is quite probable that he composed it from Tirupperunturai, as most of his other compositions also. Āṇṭāl composed her Tiruppāvai in the Pandya kingdom. These works deal with a kind of Sakthi worship. According to Tiruvempāvai, its theme was 'Praising Sakthi'. While Tiruvempāvai extends Sakthi worship to worship of Lord Siva by young maidens for obtaining good husbands and for fertility of the land through plenty of rain, Tiruppāvai extends Sakthi worship to worship of Lord Viṣṇu for the same fast.

According to some commentators, Tiruvempāvai deals with nine Sakthis, each one awakening the other for the preservation and well-being of the world. It is Mārkaḻi Nōṉpu, 'fast during the month of December -- January', that has become the theme in both Pāvai poems. The Tai nīrāṭal 'water-cutting in the month of January-February', which also went on by the designation of Mārkaḻi Nōṉpu, has a long History in Tamil cultural Heritage. There are many references to this in Kalittokai and Paripāṭal. It is worthy of note that all these references point to Vaiyai river and the Pandya Kingdom. According to M.Raghava Ayyangar, the Tai nīrāṭal, also known as Ambā āṭal denoted a kind of Sakthi worship, not connected with Saivism or Vaisnavism, conducted by very young girls. In course of time, this evolved into young maidens' fasting for obtaining good husbands. During the Bhakthi era when Saivism and Vaisnavism were sweeping the Pandya kingdom, Māṇikkavācakar was concerned with the needs of Saiva women while Āṇṭāl was concerned with the needs of Vaisnava women. While Māṇikkavācakar confined himself to twenty verses, Āṇṭāl went on to compose thirty verses.

It can be said that the Saiva Bhakti literature of the Chola kingdom reached its Zenith in Periyapurāṇam and that the Saiva Bhakthi literature of the Pandya kingdom reached its zenith in Tiruviḷaiyāṭar Purāṇam. What is genrally referred to as the

Imperial Age of the Cholas in the History of Tamil Literature, ranging from tenth century A.D. to fourteenth century A.D. did not correspond to the political History of Tamilnadu. During the last century of that period, the Pandyas had replaced the Cholas as the Imperial Power in the South. The Pandyas ruling from Madura were the Emperors then. Nampi Āṇṭār Nampi, who collected and classified the Tirumuṟai at the request of Rajaraja I, the great Chola Emperor, was able to enlarge the Tiruttoṇṭattokai of Cuntarar into the Tiruttoṇṭar Tiruvantāti; he also composed six literary works on Campantar and one on Appar of Chola kingdom. Cēkkiḻār, a minister of Kulottunga Chola II went on to describe the Chola Kingdom at Tiruvarur and presented his book at Chidambaram in that Kingdom. There are two versions of Tiruviḷaiyāṭaṟ Purāṇam with minor variations Vēmpattūrār Tiruviḷaiyāṭal and Parañcōtiyār Tiruviḷaiyāṭal. The former work is generally assigned to the thirteenth century A.D., the Age of Imperial Pandyas. The latter work might be a few generations late. While the Chola kingdom was extolling men who propagated Saivism, the Pandya Kingdom extolled Lord Siva for his playful acts to help his devotees.

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EPICS WITHIN EPICS - MINI EPICS

M. Shanmugam Pillai

Epics are long narrative stories, hereafter referred to as central stories, embedding into it several short and mini stories. Thus there are three kinds of stories in an epic, the central story, short stories, otherwise called episodes and supporting stories, herein referred to as minisodes. This classification applies for most of the epics in Tamil.

The central story is the important story in an epic, longest in it, in which several characters participate. It gives the complete life history of one or more characters in verse form. It is descriptive in nature and is narrated in a continuous form by the author, as if happening at the time of narration. The story has the traditional five fold division -- a beginning, growth, climax, decline and fall, and it is also possible that one or more of these divisions are absent in some epics. But omission of any part of the story will distort the continuity of the story Muthu Shanmugam and R.Prema 1980, p.1)

Episodes

Episodes are short stories embedded into the central story and they may be many in an epic. And for the success of an epic, there has to be an order and / or usefulness in embedding episodes. Usually these stories are not contemporaneous with the central story, and in most cases, they have happened before the central story and a few of them are contemporaneous with the main story. They are told sometimes by the author of the epic, and by the characters in many cases. Very few characters participate in an episode and usually it relates to a particular incidence or a small portion of the life of a particular character. But never does an episode give the complete life history of a character or characters. Each of these stories may occupy a few lines in an epic. (Muthu Shanmugam and R.Prema 1980, pp.1-20).

Supporting stories, are titbit stories or mini stories, embedded into either the central story or into episodes. Only a single character participate in it and such stories can be many in an epic, spread all over. The details and elaboration of these titbit stories are left to the imagination

of the reader. A theme, or an important event, or just the name of a character in a well known story, is alone mentioned in a crisp manner, without details. Such stories are used as illustrations, or as supporting examples, as similies, as backgrounds or used for praises.

Apart from these three types of stories, there is also a fourth type which we call mini epic, a main story, embedded into the central story of an epic. The attribute mini is used here to distinguish it from the expressions major and minor epics in Tamil. The embedding of a mini epic is optional unlike episodes & minisodes the embedding of which looks obligatory, there being no epic in Tamil without episodes or minisodes. And in fact, we have only two epics in Tamil which have mini epics embedded -- in Manimekalai and in Kamban's Ramayanam. So far, critics of Tamil literature have included mini epics too under episodes. For them all stories other than the central story are episodes -- episodes, minisodes and mini epics, all in one portmanteau, though they are different in structure, form and purpose. This has happened because there is no proper theoretical discussion available for them, nor did they attempt to evolve one.

The central story in an epic, as we have already seen, describes the whole life or a great portion of the life of the hero and / or heroine, and it is comparable to the concept of a novel in modern literary genre. Most of the novels, if rendered into verse, may pass for epics. Mini epics also describe the whole or a greater portion of the life of a particular character, but they are embedded into the central story. There will be only one such story in an epic, if it has one, and such stories, as we have already said, are not obligatory. In length, in completeness, in importance and in purpose, it is next only to the central story and the two, the central story and the story of mini epic, have a number of parallelisms, and differs very much from episodes and minisodes. The story of Āputtiraṉ in Manimekalai, and Iraṇiyaṉ in Kamban's Ramayanam, are mini epics according to our criteria.

Story of Āputtiraṉ

Sāttaṉār, the author of Manimekalai, gives the story of Āputtiraṉ, complete, in this birth and also a great part of his life in his next birth, in four out of the thirty kātais in the epic, in Kātais 13, 14, 15 and 25. The first three kātais describe his life in this birth and the 25th kātai gives a portion of his life in his next birth. In its size, completeness, importance and usefulness, it is next only to the central story.

Āputtiraṉ was born to a brahmin lady Cali (Cāliṉi), the wife of a brahmin Apañci of Benares, by illicit means, for which she had to undertake a pilgrimage to Kumari, though

pregnant, as an expiation for her sin. She gave birth to a boy on the way, but deserted it in a jungle. A cow fed the baby with its milk for the first seven days when the baby was picked up by a childless brahmin couple; Puti and his wife from Vayavaṅkōṭu. They raised the baby as their own and gave him the best of brahmin education. He was beaten and driven away by the brahmins when he tried to save a sad looking cow, kept ready by the brahmins for sacrifice. Afraid that he may not be accepted by the people there, Āputtiraṉ left for southern Madurai, where he used to beg, with which he fed the blinds, the lame and the deserted ones and ate. One day while sleeping in the temple of Cintātēvi, at mid night, some people came to him very hungry and tired. But he had nothing to feed them in the night and was helpless and worried. Goddess Cintātēvi appeared before him, gave him a large vessel, amutacurapi, which will never cease to give food. He fed those people with it, that night, and from that day on, he started feeding the hungry ones, people as well as birds and animals and as a result he was always surrounded by them. Lord Indra, shaken by his acts of benevolence, appeared before him, saying that he had come to bless him with anything that he would ask for. Āputtiraṉ laughed and said that he just wanted to be left alone with his amutacurapi, which helped him to see the smiling faces of the hungry ones. Indra feeling insulted, went back, bent upon wreaking vengence on him. He showered enough rains in the country and there was plenty and prosperity everywhere. Everybody had enough to eat and nobody was in need of food. Āputtiraṉ's amutacurapi became useless. Disgusted, he boarded a ship bound for Cāvakattīvu, where, he heard that there was no rain and the people were starving. On his way, he got down in the island Manipallavam, where the ship stopped for a break, but sailed away without Āputtiraṉ, thinking that every one got back into the ship. In that uninhabited island Maṉipallavam, he could not use the amutacurapi either. Disappointed, he placed the vessel into the pond Kōmuki, saying that it should come out ones a year and reach him or her, who would feed the needy ones with kindness and love. He then took to fasting and died, but only to be born again to a cow in Java, so that he could be of use there.

The cow which fed Āputtiraṉ for the first seven days in his previous birth, when he was deserted by his mother, went and stayed with a saint Maṉmuka, who did tapas at Tavaḷa mountain, with golden horns and hoofs. It gave milk to feed people even without delivering a calf. Āputtiraṉ never forgot the cow which fed him and in gratitude was born to this cow on pure pūrṇima of Vaisaka, the day on which Buddha was born. Auspicious omens, identical with those at the time of the birth of Buddha, appeared on that day. Kantiṟpāvai

told the saints of Cakkaravāḷak-kōṭṭam that a great and virtuous person who died in the island Maṇipallavam, was born in Java to save its people, and also directed Maṇimēkalai to Aṟavaṇa Aṭikaḷ to listen to the rest of the story of Āputtiraṉ. The king of that country, Pūmicantiraṉ, received the child from the saint Maṉmuka and raised it. He has now ascended, as Puṇṇiyaracaṉ, to the throne and under his benevolent rule there were plenty and prosperity in that country. Maṇimēkalai met him and at her suggestion he visited Maṇipallavam and came to know of his previous birth.

Āputtiraṉ Story cannot be an Episode

Critics of Tamil literature have been referring to this story as an episode for two reasons, first that it is not the central story and secondly that it is told by a character in the epic and not by the author himself (Mangalavathi Gabriel 1978, p.109). But it does not relate just one or two events in the life of Āputtiraṉ. It is his complete life in two consequetive births and as such cannot be an episode.

The Importance of this Story

This story is narrated by Aṟavaṇa Aṭikaḷ to Maṇimēkalai, Mātavi and Cutamati. Aṟavaṇa Aṭikaḷ is a prestigious character in the epic, a leader, a great scholar and a good exponent of Buddhism, commanding immense respects, and it is he who is telling this story. Tīvatilakai, who was responsible for Maṇimēkalai getting the amutacurapi, could have told the story. But she directs Maṇimēkalai to Aṟavaṇa Aṭikaḷ to listen to this story. Perhaps she feels herself too small to relate the story of such a great character as Āputtiraṉ. Sāttaṉar adopted this technique perhaps to emphasize the importance of this story.

Epic Status for the Story of Āputtiraṉ

This main story is equal in importance to the central story, though in length it is not that long. It is the longest excepting the central story. There are quite a number of points of striking similarities between the central and main stories. Maṇimēkalai is born to Mātavi who is a dancer, through Kōvalaṉ, but not through any wedlock. Mātavi is an unwedded wife of Kōvalaṉ. Āputtiraṉ also was born to Cāliṉi not through her wedded husband but by illicit connections and as such the births of both of them are not socially prestigeous ones.

Maṇimēkalai, when she wanted to lead a life of righteousness, the life of a Buddhistic saintly spinster, had to face several problems just because of her birth. When she walked through the streets as a Buddhistic saint, she was surrounded and followed by noisy people as when people thronged to see Arjuna when he walked in the streets as a pēṭi (Manimekalai 3.146-148).

And there were troubles from Udayakumaran who came following her where ever she went. Similarly Āputtiraṉ was discarded and cursed by the brahmins for his illegal birth. But both of them faced boldly all the troubles, and the repercussions from the society, lived single, she as a spinster and he as a bachelor, unblemished.

The parallelism between Maṇimēkalai and Āputtiraṉ is further emphasized by the fact that only these two were found eligible to possess and use amutacurapi, which they used to relieve the hunger of the people, the cherished motivation in life, for both.

Thus we see, in their birth, in their being accepted by the society, in their dedication to the service of humanity, there are a number of similarities which raises Āputtiraṉ's story to the status of an epic, almost identical with that of Maṇimēkalai, but having only a secondary status and importance in that epic story.

The Author's Inclination and Special Liking

It may be that Sāttaṉar a Buddhist, had a special liking for Āputtiraṉ's story who dedicated his whole life to serve the humanity. The main theme of the story is in Āputtiraṉ receiving amutacurapi and the use of it, which is the important parallelism with Manimekalai's story. But the author elaborates his life in two different consequetive births, his visits and births in different places, not directly relevant to the central story, because perhaps the author had a special attachment to it. The author depicts Āputtiraṉ as an incornation of Buddha, and Buddhists believe that Buddha will be born again and again to teach his tenets. When Āputtiraṉ was born as the son of Māṉmuka through a cow, symptoms identical with the birth of Buddha could be seen (Manimekalai 15. 27-28). Āputtiraṉ was born in Java as Puṇṇiyarāca on the same day on which Buddha was born, in Vicāka of the month of Vaikāci (Manimekalai 15. 23-25). And all these are brought in to indirectly emphasize that he in an incornation of Buddha.

Emphasizing the Central Theme of the Epic

The central theme of emphasis in this epic is the eradication of hunger from all those living in this world (Manimekalai 11.92-96). And in the life of Maṇimēkalai with the help of amutacurapi, she devoted her whole life to this service. In Āputtiraṉ's story also, this is the main theme. He fed the hungry ones with his beggings first, and then with the help of amutacurapi and when it became useless, as there was no one in need of food because of plenty, he even went to other countries to feed people. And when he found that his amutacurapi could not be used, he discarded it and died.

The Story of Iraṉiyaṉ (Hiraṇya)

Kamban gives this story in Uttakāṇṭam in Iraṉiyavataip-paṭalam. This is the story of the destruction of Iraṉiyaṉ by Tirumāl (Vishnu), in the form of Narasimha (Kamban, Rāmāyaṉam Uttakāṇṭam, Paṭalam 3). It can also be the story of Pirakalātaṉ, an young but a great devotee of Tirumāl. It introduces Iraṉiyaṉ not from his birth, but as a king of immense valour and arrogance, and ends with his destruction. Pirakalātaṉ's story in it, extends from his birth till he being crowned as the king, after the death of Iraṉiyaṉ. The story is full of a series of successive events leading to the death of Iraṉiyaṉ.

Kamban gives his story in 175 verses in a paṭalam exclusively devoted for this. He describes in it, his great valour, his dictatorial attitude and his command that his name should be recited by every one as the praṇava mantiram in all the worlds, in the place of aṣṭākṣaram, the praṇava mantiram, in devotion to Tirumāl. He usurped the duties of Mummūrtties -- Brahma, Vishnu and Śiva, and those of aimperumpūtam -- pañca bhūta, the five elements, after receiving the blessings and promise from Brahma, after hard tapas, that neither in light nor in darkness, neither in fire nor in water, neither in wind nor in sand, neither inside nor outside, neither by weapons of war nor by Yama, the god of death, would he die. Pirakalātaṉ, (Prahalatha) his own son, refused to recite his name, but insisted on reciting and repeating the name of Narayana, as the mantiram. Having failed to change him, Iraṉiyaṉ attempted to get rid of him by every means from which Pirakalātaṉ survived by the grace of Tirumāl. And enraged by this, Iraniyaṉ asked Pirakalātaṉ where Narayana is present. Pirakalātaṉ replied, he is present everywhere. Pointing to a pillar near by, Iraṉiyaṉ asked whether he is present in it too. Pirakalātaṉ said yes, and when Iraṉiyaṉ broke the pillar, Narasimha came out of it and killed Iraṉiyaṉ, ingeniously avoiding all the prohibitory means that Iraṉiyaṉ had received from Brahma. Pirakalātaṉ was crowned the king by the Dēvas and the enraged Narasimha was ultimately pacified.

It is not an Episode

This story is not found in the original text by Valmiki, but it is a creation of Kamban and is embedded into the central story, in a fit place to give emphasis to the main theme of the epic. It is considered to be one of the best creations of Kamban by critics and they have all been referring to it as an episode since it is narrated by Viṭaṇaṉ (Vibishana) and not by the author of the epic, and is embedded into the central story (Vaiyapuri Pillai p.282; Aiyar V.V.S.1970, p.142; Kandaswamy, S.N. 1972, pp.86-98). Like the story of Āputtiraṉ, it is also a story of many absorbing and continuous events in the life of Iraṉiyaṉ and Pirakalātaṉ and as such could not be

an episode.

The Narrator

This is a story narrated by Vīṭaṉaṉ (Vibishana) in front of Rāvaṇaṉ, in his vain attempt to change his mind. Vīṭaṇaṉ is next only to Hanumāṉ in his devotion to Rama and as a result is included among the āḻvārs as Vīṭaṇālvār. He has none of the vices and arrogance of the asuras, though he was born as the brother of Rāvaṇaṉ.. But, at the same time, he was not lacking in courage and boldness to fight for the right cause and for justice, even against his own powerful brother. And the Dēvas and others praised him for his justice and righteousness, and finally, after the death of Rāvaṇaṉ, he was crowned the king of Lanka. The story has been very artistically embedded into the epic to serve the purpose of drawing a parallelism with the life of Rāvaṇaṉ in Vīṭaṇaṉ's attempt to disuade Rāvaṇaṉ from his arrogance to insult Rama and from his misdeeds. Thus there cannot be a better person to narrate and a better place to embed this story into the epic.

Parallelism with the Central Story

There are a number of points of similarities between the stories of Rāvaṇaṉ and Iraṇiyaṉ. Iraṇiyaṉ received the blessings from Brahma, after severe penance, prohibiting every means of killing him. Intoxicated by this achievement, he started commanding the Gods and Dēvas. Rāvaṇaṉ also behaved like this, commanding the Gods and Dēvas. Both of them belong to the asura clan, and are enemies of Tirumāl. They found pleasure in humiliating Him. Ravanan stealthily carried away Sita to Lanka and Iraṇiyaṉ ordered that nobody should recite the name of Narayana, the mantira of eight letters, and instead they should all recite only his name as the praṇava mantiram.

Rāvaṇaṉ and Iraṇiyaṉ were both advised for the good, by their close kinsmen, Rāvaṇaṉ by his own brother Vīṭaṇaṉ and Iraṇiyaṉ by his own son Pirakalātaṉ. Vīṭaṇaṉ and Prakalātaṉ are devotees of Tirumāl, of His different avatars, Vīṭaṇaṉ a devotee of Rama and Pirakalātaṉ a devotee of Narayana. Iraṇiyaṉ and Rāvaṇaṉ never listened to their advices and as a result had to meet their deaths in the hands of Tirumāl. In the end, Vīṭaṇaṉ and Pirakalātaṉ, the devotees of Tirumāl, were crowned kings and both were blessed by the Gods and Dēvas. In both the stories, Tirumāl takes avatars to destroy the asuras Rāvaṇaṉ and Iraṇiyaṉ. There is a belief among the Vaishnavites that Vishnu takes avatars to destroy the people when Bhūmādēvi -- Mother Earth, is unable to bear the burden of human weight. She can bear the burden of any number of human beings, but not the burden of a single evil person like Rāvaṇaṉ or Iraṇiyaṉ. Both these stories, are illustrations of this philosophy of the vaishna-

vites. And to conclude, we may say that the themes of both these types of epics -- the epic and mini epic, is the same and only the characters and the developments of the stories are different.

Kamban's Inclination Towards this Story

Kamban refers to many avatars of Tirumāl in his epic, at different places. But none of them got the special treatment as for Narasimha Avatar. In palakantam, Visvamitra refers to Vāmanā Avatāram (Balakantam, Velvippatalam 17-37), but not in such great details. He could have narrated the story of Narasimha also in a few stanzas towards the end of Mantira Paṭalam. There is no other story in thee epic, (of course excluding the central story) which has been given a separate paṭalam, complete. Even the story of Akalikai, in Akalikai paṭalam, does not occupy the complete paṭalam. It is only a part of it.

The story is about the destruction of Iraṇiyaṉ. But Pirakalātaṉ in the story has been given more importance. The bakthi of Pirakalātaṉ, his recitation of the mantira of eight letters, his escape from death because of the blessings of Tirumāl, his unflinching faith in and devotion to Tirumāl even under very severe circumstances -- these have been given more importance than Iraṇiyaṉ. This may be due to Kamban's special inclination towards Pirakalātaṉ, a young and great devotee of Tirumāl, steadfast and unwavering. But the destruction of Iraṇiyaṉ, predicting that of Rāvaṇaṉ, which it symbolises, is the ultiamte vindication of bakthi over arrogance, cruelty and intolerance, and this is the essence of this epic. Hence, though Kamban had a special attachment towards this young devotee of Tirumāl, he named the chapter after Iraṇiyaṉ. An oral tradition current about Kamban, also gives support to this contention. Kamban wanted to render Bhāgavata purāṇa also into Tamil, when he was writing Rāmāyaṇam. But he gave it up, afraid that he would not be able to do both in his lifetime. In Bhāgavata purāṇa, he particularly liked the story of Pirakalātaṉ, and wanted atleast to give that one into Tamil. So he ingeniously included it in his Rāmāyaṇa, though it is not found in Valmiki. At the time of presentation -- araṅkēṟṟam as it is known, of his Rāmāyaṇam at Sri Rangam, scholars assembled there, would not accept this paṭalam. Narasimha at Sri Rangam signified His acceptance by nodding His head, seeing which, the scholars did not oppose and accepted it. This traditional story reveals his special liking for the story of Pirakalātaṉ.

Kamban has used this paṭalam, perhaps to express his devotion to Tirumāl and sing of His greatness, through Pirakalātaṉ, which fits in very well, and a great part of this paṭalam is devoted mainly for this. Rama is created as if an ordinary human being, undergoing all the sufferings and happiness of a human being, in an ideal manner. Rama never

claimed or showed that he is an avatar of Tirumāl -- that is the Rama that Kamban creates, and as such, there is not much scope to sing of His greatness in the epic. But the situation is very different in this story, in this mini epic. It is the story of a great but young Tirumāl bhakta fighting against a powerful enemy of Tirumāl, and so, there is more opportunity for him to sing of the greatness of Tirumāl through Pirakalātaṉ.

Above all, Kamban's reverence for Pirakalātaṉ could also be seen in the manner of his reference to this devotee of Tirumāl. He never referred to him by name as Pirakalātaṉ. He always referred to him in attributive expressions like aṟiñarin ariñaṉ -- the wise among the wise, tūyaṉ -- the pure one, taṉi ñani -- the unique philosopher, nāyakaṉ -- the leader, takkōṉ -- the fit person, ñāna nāyakaṉ -- the philosophic leader, vimalaṉ -- the unblemished and so on.

The central theme of Rāmāyaṇa story is the victory of right over wrong, the vindication of virtue over sin and evils. Rama is the personification of virtue and Rāvaṇaṉ is the personification of cruelty and sin. Rāvaṇaṉ had his own grave dug by himself, when he carried away Sita stealthily and refused to be advised by anyone for good. The story of Iraṇiyaṉ also exemplifies the same theme, the victory of virtues. Both these stories develop a series of events in which virtue and sin come into conflict, and in the process virtue suffering a lot only to win over sin in the end, and destroy it, personified in the destruction of Rāvaṇaṉ and Iraṇiyaṉ.

Thus we see the story of Iraṇiyaṉ is a reflection of the central story in a miniature form, emphasizing its theme and purpose, and hence, it is next in importance only to the central story and different from and more important than all the episodes and minisodes in the epic.

The stories of Āputtiraṉ and Iraṇiyaṉ are different from episodes and minisodes and as we have already seen, in theme, purpose and motivation and in their completeness, they resemble the main stories. But they are not epics either, they are embedded into epics. They are neither episodes nor minisodes. Tamil epics have already been classified as major and minor. Minor epics are very much like major epics except for a few points. These two stories are different from minor epics too (Ref. Table IV), and hence we call them Mini Epics, differentiating them from major and minor epics. The following tables list the distinctive features for grouping them under different classes.

Tables follows

Table I

Distinctive Features Common for the Two Mini Epics

1. Both are complete stories or a great portion of a story, embedded into the central stories.
2. They elaborate and emphasize the themes and purpose of the central story.
3. They are narrated by important characters in the epics.
4. The religious background for these stories is the same as for the central story.
5. They are unique in each epic - i.e., there is only one such story in an epic.
6. Both reveal the special liking ot the author for the stories.

Table II

The distinctive features, that differentiate mini epics and episodes/minisodes are listed below. The differences between episodes and minisodes are discussed in elaborate in a separate paper, and that does not affect the differences listed here. (For details refer to Muthu Shanmugam and R.Prema, 1980).

EPISODES	MINI EPICS
1. Only one or two events in the life of a character are mentioned.	A series of successive events in the life of a character are narrated.
2. Will be a small portion in the life of a character or will be a small portion of a puranic story.	Will be the complete or a great part in the life of a character.
3. Episodes will be many in an epic.	There will be only one such story in an epic.

4. Episodes are obligatory for an epic, since embedding episodes is an epic technique.	Embedding mini epics is optional, depending upon the poets inclination.
5. Narrator of episodes can be any one of the characters in an epic.	Narrator of a mini epic will be an important character in an epic.
6. Narrated to have happened in the past, in a continuous form and very rarely through conversations, should have happened previous to or contemporaneous with the central story.	Narrated to have happened in the past, but developed through conversation. Has happened previous to the central story.
7. Most of the episodes refer to themes different from the central story and very few support its theme, but even then do not parallel with the central story.	In theme and purpose, there is complete parallelism with the central story, and is used to support the theme of the central story.
8. Identical religious background with the central story is optional.	Identical religious background with the central story is obligatory.
9. Does not reveal the inclination or special liking of the author for the story.	Reveals the special liking of the author for the story.
10. It can be compared to short stories.	It can be compared to short novels -- kur̲unāvel.

Table III

Features Common for Mini Epics and Epics

1. As the heroes in the epics, Āputtiran̲ and Pirakalātan̲ are unique characters -- tan̲n̲erillāttalaivan̲.

2. The theme and purpose of the two mini epics are similar to the respective epics.

3. Rama was crowned king of Ayottiya at the end, and similarly Pirakalātan too was crowned king at the end. This is absent in the story of Maṇimēkalai and Āputtiran.

4. Aṟam, poruḷ, iṉpam, three of the four purushaktas, are common. Viṭu is attributed for epics, not for mini epics.

5. The births of Āputtiraṉ and Maṇimēkaḷai are mentioned as in the epics, and they are not socially prestigeous.

Table IV

Distinctive Features of Major, Minor and Mini Epics

MAJOR EPICS	MINOR EPICS	MINI EPICS
1. Independent	Independent	Embedded within the central story (epic)
2. Has all the features listed in Taṇṭi Alaṅkāram for an epic.	Has all the features listed as for major epics except vīṭu.	Has only very few features of major/minor epics
3. Has a number of episodes and minisodes embedded	Same as for major epics	Has only minisodes embedded.
4. Has major and minor divisions like kāṇṭam and paṭalam or, as in Maṇimēkalai has a number of minor divisions without any major division.	Same as in major epics.	Does not have any major division The story is narrated in one or in a very few minor divisions.
5. Narrated as if happening at present.	Same as for major epics.	Narrated as has happened in the past in reference to the central story.

6. Descriptive in nature i.e. the author describes or narrates the story.	Same as in major epics.	Narrated in a reportive manner, i.e. the author describes the story as if narrated by a character in the epic.
7. Has three types of characters - main supporting and minor.	Same as for major epics.	This division of characters will not apply for mini epics.
8. Has an independent epic name.	Has an independent epic name.	Does not have an independent epic name Will be a small portion of an independent
9. Can be compared to a novel in modern literary genre.	Same as for major epics.	Can be compared to a short novel, Kuṟunāvel in modern literary genre.

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SUBRAMANIA BHARATI*

Prema Nandakumar

At the outset my grateful thanks to Prof. S.N.Kandaswamy and the Department of Literature of the Tamil University for giving me this opportunity to be with you during the proposed seminar on Subramania Bharati. Of course, in my rather not-too-short a career as a seminarian in the course of three decades, this is the first time when I find myself totally uncertain of what to say. This is because, so far I have no idea of what the thrust of the seminar is to be -- Prof. Kandaswamy's letter mentions only a 'Seminar on Bharati' -- the duration of the seminar, the number of participants or their names. Thus, I do not know how best to mould my keynote address that should set the proper tone for the seminar. Hence, you will have to forgive me if I appear discursive and pardonably dull. Fortunately, we are dealing with a poet like Subramania Bharati. And Bharati contains multitudes. His works are always a joy to read and there is always an accommodative vantage-point to view him from a new angle. With this total faith in Bharati, I proceed.

Indeed, I bring nothing to this seminar except this total faith in Bharati's writings. Not Tamil scholarship, for my basic discipline was in English literature. Not research background for my own doctoral and post-doctoral researches pertain to Indian writing in English. Yes, I have spent thirty years reading him and translating him. But it has only been a constant struggle, an eternal self-dissatisfaction, a continuous discovery of my own short-comings.

However, as a Tamil brought up on the banks of the Tambraparni river, my heart responds to Tamil -- especially the simple, unassuming Tamil of Bharati that insinuates spirals of meaning by the choice of a particular word or turn of phrase -- as to no other language. And in Subramania Bharati I have seen the golden gate that leads us to the shimmering shades of an ideal life, a life of love and joy, aesthetic enjoyment and social purposiveness, literary adventure and spiritual fulfilment.

But why Bharati again? Is he relevant still? It is more than sixty years since he passed away. Three generations and an independent India have ushered in massive changes in our political, literary and social environments. How relevant is he still? When he wrote his last poem in 1921, he had not seen the Second

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World War, the genocide indulged in by Adolf Hitler, the Atom Bomb's devastation of Nagasaki and Hiroshima, the possibilities of self-government going away. He had spoken out against the foreign exploiters of the Indian masses. A day was to come when the Indian in a free motherland feels like the African poet, John Ekwere:

> "Now no more the palefaced strangers
> With unhallowed feet
> The heritage of our fathers profane;
> Now no missioned benevolent despots
> Bull-doze an unwilling race;
> No more now the foreign hawks
> On alien chickens pray --
> But we on us!"

Sixty years! How can we think of Subramania Bharati as a modern poet? When the world over, so many isms have breezed past the literary fields, are we Tamils still imprisoned in the Bharati Age?

The answer lies somewhere in the history of Tamil literature itself. It is the native genius of Tamil literature that it effortlessly holds together the ephemeral and the eternal in a single grip. From the Sangam Age onwards, Tamil literature has never curled up into an exclusive philosophical vacuum nor has it totally surrendered to the current life-style. There is a constant linkage between the two that while our interest is kept glued to the work because of its historic present, our soul responds to the eternal values enshrined in the work. Beyond all the descriptions of kings and courtiers, courtesans and minstrels, each Sangam poem also reflects certain ideas that are never dimmed by the passage of time. Love, heroism, devotion, fraternal togetherness, friendship and compassion are some of the golden loops that bind the poems of yesterday to the contemporary consciousness. Poṉmudiyar, for instance:

ஈன்று புறந்தருதல் என் தலைக் கடனே
சான்றோனாக்குதல் தந்தைக்குக் கடனே
வேல்வடித்துக் கொடுத்தல் கொல்லற்குக் கடனே
நன்னடை நல்கல் வேந்தற்குக் கடனே
ஒளிருவாள் அருஞ்சமம் முருக்கிக்
களிறு எறிந்து பெயர்தல் காளைக்குக் கடனே

> "My duty is to give birth,
> bring him up healthy;
>
> the father's to make him
> a good citizen;
>
> the ironsmith's to forge
> a sharp killer-spear;
>
> the kings's to train him
> in the art of war.
>
> The duty of youth is to flash
> the gleaming spear in the war,
> destroy the enemy elephants
> and return in achieved glory."
> (Puram. 312.)

It may be seen that all the references except the first two are irrelevant to our days. At a time when even the Atomic power is sought to be channelised only for peaceful purposes and we look askance -- in fact, with positive distaste -- at war, war implements and war-psychology, there can be no place for the glorification of the ironsmith's duty to forge a killer-spear or the need for battle-field training or the destruction of enemy elephants. However, when we look upon the ironsmith as a symbol of modern technology and the King himself as the government's efforts to train the student in technological institutes, it follows

that the student should perceive his duty as working for his motherland and not running away to a foreign land in search of better emoluments. The thrust of the poem is patriotism at its purest; and that message has kept Ponmudiyar's poem as relevant to Indian students today as it was two thousand years ago.

Apart from this basic contemporaneity of Tamil writing, the integral nature of Subramania Bharati's works is another reason which has given him the position of a mentor for us even today. He was the morning star of our Renaissance. He continues to be the brilliant guiding-light as we uneasily negotiate the passage into the 21st century. Whichever way we turn to improve our lot, it is Bharati who guides us through his poetry; and especially so when we have to strive to achieve national integration.

ஒன்று பட்டால் உண்டு வாழ்வே — நம்மில்
ஒற்றுமை நீங்கில் அனைவர்க்கும் தாழ்வே
நன்றிது தேர்ந்திடல் வேண்டும் இந்த
ஞானம் வந்தால்பின் நமக்கெது வேண்டும் ?

எப்பதம் வாய்த்திடுமேனும் — நம்மில்
யாவர்க்கும் அந்த நிலை பொதுவாகும்
முப்பது கோடியும் வாழ்வோம் — வீழில்
முப்பது கோடி முழுமையும் வீழ்வோம்
வந்தே மாதரம் என்போம்.

What is life without unity?
Division only spells ruin.
Is we hold fast to this truth,
what more can we need?

We'll bow to the Mother

Whatever may befall us,
We'll equally share it.
Thirty crores shall thrive
or all suffer defeat.

We'll bow to the Mother

We'll bow to the Mother,
Bharat the Mother.

And yet. And yet few lives have been more chequered, and Bharati had constantly to struggle against poverty at home and Government hostility outside. He was a Titan, he stood his ground bravely; and he wrote ceaselessly, producing some of the most enduring poetry by achieving the rare wedding of Tamil speech and entrancing music. It is astonishing that even the journalistic hackwork did not seriously injure him. On the other hand, he brought a poetic glow and musical lilt even to his most casual prose writings. For example, we see journalism as sparkling conversation in *Taracu* (The Scales) enlivened with purposeful humour. The essence of the old scriptures as he saw it is memorably posited in his Prefaces, translations and expositions. He heightened satire and social criticism to the position of unforgettable creative art in *Cantrikaiyin Katai* and *Nana Ratham*. This is true of his stray journalism in English as well. What he said of conditions in India at the beginning of the century is couched bold, defiant, wise words -- words that are applicable today:

> And the first thing modern India demands of England to-day is that none may interfere with free speech in India. Free speech is the truest ally of every sensible government. When you stifle men's voices, you embitter and harden their hearts. And this word is based on the mind: 'Thoughts are things'."
>
> An old Indian writer says that the wise king should care more for the respect of a hundred

thoughtful men than the blind allegiance of a million fools. And the first condition for any sort of State to be respected is to permit free speech in all things and to all parties".

'Freedom from fear' is the *mantra* of Subramania Bharati's poetry. His patriotic poems may not take us today to the exciting summits of emotional frenzy as they did in the 'thirties and the forties'. But because Bharati did not sing only about political freedom, his songs of freedom have become images of a unified India. Bharati saw India as a Mother, great Bharat's Queen, the eternal sustainer. She stays in Dharma, even though apparently fallen; she stays in Truth, even though exploited; she saves from oblivion's curse our Books of Knowledge, even though we are careless; she gives us plenty, even though we indulge in destruction; she gives us the taste of freedom, even though we are apathetic.

முன்னை இலங்்கை அரக்கர் அழிய
முடித்தவில் யாருடை வில்? எங்கள்
அன்னை பயங்கரி பாரத தேவி நல்
ஆரிய ராணியின் வில்.

Whose was the dread bow
That destroyed the Lanka hordes?
It was our terrible Mother's--
The Arya Queen, Mother Bharat.

Subramania Bharati is referring to the bow of Rama as the collective power of the nation. Bharati always sang not as a politician, but as a patriot. He loved Tamil intensely but his love for the union of India was intense. In poem after poem he emphasised the integral nature of the country and insinuated that the part could never equal, and much less exceed, the whole. In such a poem as 'Bharat our Land' --

மன்னும் இமயமலை எங்கள் மலையே
மாநில மீதிது போற் பிறிதிலையே
இன்னறு நீர்க்கங்கை ஆறெங்கள் ஆறே
இங்கிதன் மாண்பிற் கெதிரேது வேறே?

The mighty Himavant is ours--
There is no equal any where on earth;
The generous Ganga is ours--
Which other river can match her grace?" --

Bharati is engaged in projecting India as a whole before our consciousness, a unified vision of India in her physical beauty and majesty, with all her intellectual and spiritual qualities and powers. For a country like ours so fatally prone to cultivate narrow loyalties based on religion, caste, sect, region and language, this projection of the Mother -- the physical, intellectual and spiritual power and personality that is Bharat -- is perhaps Bharati's greatest contribution to the cause of our national unity.

In no other poet before or after Bharati has the concept of Mother India merged so beautifully with the concept of a Mother Goddess. The Sakti poems and Knowledge Hymns of Subramania Bharati answer a deep need in our soul that seeks freedom from fear. The Swatantra Devi is also Parasakti. The veil of illusion, Maya, is rent asunder by the sword of fearlessness. The process is so simple!

பயமெனும் பேய்தனை அடித்தோம் பொய்மை
பாம்பைப் பிளந்துயிரைக் குடித்தோம்
வியனுலகனைத்தையும் அமுதென நுகரும்
வேத வாழ்வினைக் கைப்பிடித்தோம்.

Having vanquished the demon Fear,
And killed the reptile Lie,
We have embraced the Veda's path
That leads to Brahma Knowledge.

Bharati's miscellaneous Poems are a tribute to his versatility. At the same time, it is astonishing how the poems have stood the test of time so well. Women's emancipation, for instance. How far have we progressed in these eighty years? Rather, there has been a lot of regression, perhaps! It is sad that much of Bharati's description of the 'new woman' has remained no more than a dream-vision. Bharati's *putumai-p-peṇ* is a creature of self-knowledge and self-respect, and she would teach and rule as also love and live, and she would claim her right to follow the occupations that the males have long monopolised as their own. Nor is this a merely Amazonian conception, for although the new Indian woman may scale the heights of knowledge and power, she will not forget her innate womanliness and grace and genius for love:

காதலொருவனைக் கைப்பிடித்தே அவன்
காரியம் யாவினும் கைகொடுத்து
மாதரறங்கள் பழமையைக் காட்டிலும்
மாட்சிபெறச் செய்து வாழ்வமடி !

Holding our beloved's hands
  And rendering manifold help,
We shall yet stamp a glory
  Greater than the laws of yore.

To Bharati, a devotee of Parasakti, woman was no frail creature; she was actually man's Sakti, the source of his strength:

Women's dharma destroys adharma,
Let's dance in their praise!

Kannan Pāttu (Krishna Songs) may be considered as Subramania Bharati's contribution to devotional poetry based on the concept of an *archa* form. All the same, Bharati does not follow the traditional descriptions of Krishna's form, accoutrements and ornaments. If poets often seek to see God in the human personality of Rama, Bharati concerns himself with the human elements in the divine personality of Krishna. It is thus that *Kannan Pattu* escapes the label of religious poetry. Bharati analyses the contradictions that clash and merge in this godhead with electrical quickness:

உண்மை தவறி நடப்பவர் தம்மை
உதைத்து நசுக்கிடுவான்; — அருள்
வண்மையினாலவன் மாத்திரம் பொய்கள்
மலைமலையாவுரைப்பான் — நல்ல
பெண்மைக் குணமுடையான் — சில நேரத்தில்
பித்தர் குணமுடையான் — மிகத்
தண்மை குணமுடையான் சில நேரம்
தழலின் குணமுடையான்

"The falsifiers of Truth --
  He smites them without pity;
Yet himself a liar he is,
  To walk the path of Grace.
Softly feminine is he,
With a madman's vagaries;
  And cool as morning dew,
    Yet hot as glowing coal".

Presently waves of his devotion for this charming Divine as the guardian Sakti, overwhelm the poet and he takes the final refuge in the Divine Mother Kannamma by a mind-boggling leap of self-transcendence:

நின்னைச் சரணடைந்தேன் கண்ணம்மா !
நின்னைச் சரணடைந்தேன்
பொன்னை உயர்வைப் புகழை விரும்பிடும்
என்னைக் கவலைகள் தின்னத் தகாதென்று
நின்னைச்சரண்

I take refuge in Thee! Krishna
    my Mother,
I take refuge in Thee.
That I may never be obsessed
By greed for gold or fame or
    power

I take refuge

மிடிமையும் அச்சமும் மேவியென் நெஞ்சில்
குடிமை புகுந்தன, கொன்றவை போக்கென்று
நல்லது தீயது நாமறியோம் அன்னை
நல்லது நாட்டுக தீமையை ஓட்டுக.

Slavery and fear have camped
in my heart!
For slaying and dispelling them

I take refuge

Mother, as we know not the
right from wrong,
Instal the right and drive the
false away!

I take refuge

Thus when we see Panchali projected as Mother Sakti, it seems perfectly logical. Bharati's universe is not made up of building blocks like society, politics, religion, language and commerce. When due to envy or greed a wrong act is committed at the political or social level, the act affects the entire structure of the external universe of phenomena and the internal spaces of the human soul, even as the tightening or loosening of a bootstrap does when shoes are worn. It was Duryodhana's envy that led to the evil insult perpetrated on the floors of the Kuru court. But it affected not only Droupadi or the Pandavas. The insult affected the entire universe as if the centre of the earth had been pierced by a sharp instrument.

Duhshasana rose, and fell to
the task
Of is robing mother Droupadi
....
When as one demented
The fiend began the outrage,
She forgot the earth, sought
the inner Light,
And united with the Supreme.

Swift comes the answer from the beyond and here stands revived Droupadi, like a cone of fire with her unbounded dark tresses curling around, taking her terrible vow:

In Parasakti's name I take
this vow:
Not till the fiend Duhshasana's
red blood
Mingles with demon Duryodhana's,
And I smear my tresses with
their blood
And then bathe and wash it
all away --
Not till then will I gather again
These my tresses unloosened
and wild!

But is it merely the princess of Panchala whom we see in our mind's eye when we read the swift-moving, fire-tinged epic, *Pancali Capatam*? We move beyond myth and history and enter the all-inclusive world of prophetic poetry where Light and Darkness, Good and Evil struggle for the soul of the world. In the words of Professor K.R. Srinivasa Iyengar:

"Droupadi whose soul is hurt by the spectacle of human cruelty, Bharat Mata whose body is bruised and whose soul is writhing in agony, and the Great Creatrix -- the seed-of-all, womb-of-all, -- coalesce together and confuse our familiar categories of understanding. Droupadi is no doubt Woman -- she is all the women who have borne the burden of suffering in this sullied sublunary sphere -- but she is also, see from another angle, the Sakti to whose awakened eyes the Parasakti has revealed Herself, and Her Personalities and Powers. Bharati's *'Pancali Capatam'* viewed thus in the context of the Aurobindonian

and Gandhian revolutions of our time is somewhat of a *mantra* of redemption, an enunciation of the religion of patriotism".

For those of us who want to rest away from the heaviness of it all, from the sorrow and struggle in time, from the weariness of the mundane world, there is always Bharati's *Kuyil Pattu* that teaches us to see the beauty in the beast through the magic prism of love. It is love that brings out the best in ourselves and in others! If love fails, only death remains to haunt us as a terrible spectre. *Kuyil Pattu* is a superb poem in praise of love, its utter unpredictability, its glorious illogicality, and its defiant deathlessness. The ten pairs of contrasting words used in the title song bring to us the need for love in our everyday life. It is love -- the lover's love, the mother's love, the artist's love -- that sustains the universe and assures us of a living continuity in a world made up of failure, disenchantment, death.

And there is the *madhu vidya* of Vedic inspiration in Bharati's prose poems, poetic excellences that would teach us how to transform our mundane lives into the spiritual living of honeyed delight. As the prose poems belong to the last years of his career, they also constitute the fruits of his religious experience. Starting with the Nature around, Bharati soon exceeds it to reach up to a Spirit beyond Nature.

> The Air is Mahasakti's means
> for playing
> The game of Life".

Vedic in inspiration and romantic in conception, the prose poems of Bharati astonish and satisfy the reader by their sheer energy of utterance and opulence of imagery. Triumphs of suggestion, they succeed in nourishing in our hearts, to borrow a line from Walt Whitman, "the germ of the perception of the truly great, the beautiful and the simple".

Bharati died young. But he died full of honours if not of years; and died acclaimed universally as one of the immortals in the world of letters. He has left God's plenty as it is, and we shall cherish it with love, understanding and reverence, and honour his name as that of one of our supreme benefactors.

Roots of Literary Criticism in Tamil

M. S. Thirumalai

1. We begin by taking a simple view of literary criticism by dividing it into two major activities both interrelated but could be kept separate. This bifurcation is rather similar to what linguists make between lexicography and lexicology. One type of activity of literary criticism is to talk of a work already available and the other is to elaborate on general principles and structures that govern the study of any aspect of literature. To comment on a novel by Mu.Varadarajan belongs to the former category but to discuss the general features of **novel** as a genre, even with reference to the novels of **a** language, belongs to the second category. This, indeed, is a naive distinction, but, we think, is not very wrong. This paper aims at identifying certain literary criticism-like activities in classical and medieval Tamil, and at exploring the measures adopted by these "literary critics". Our assumption here is that there were, indeed, literary criticism, like activities in classical and medieval Tamil to be found in the commentaries and that these could be viewed as the roots of literary criticism in Tamil. Elaboration of general principles of literature and of literary criticism, is done, in a manner of speaking, in the traditional grammars under **porul, ani,** and **yaappu,** all three relating to form and sense of verbal art, and at times in the other parts of the grammar proper as well. To talk on a work already available is the job of a commentator, thus leading us to view the works of the commentators as works of literary critcs. (Such a view is offered also in Aravindan 1968.) There may be several objections to this view. However, our definition of literary criticism given above is, indeed, broadbased and, judged on that basis, our view is not altogether a far-fetched one.

2. To comment on a work already available is done in any one of four ways as follows:

(i) One could comment on the text and thus make a criticism of the same while teaching the text. Unfortunately the oral tradition followed in classical and medieval times is not recorded and hence the content that went into teaching a text and the procedures adopted are not readily available to us now. some extrapolation is possible through sutras of **Nannuul,** a 13th Century A.D. grammatical work (sutra 39 in particular).

(ii) One could comment on a work by writing commentaries on it. Writing commentaries, the types or components of commentaries and the classification of the commentaries are all referred to even in **Tolkaappiyam** of pre-Christian era, in its chapters on **marapiyal** and **ceyyuliyal.**

The present paper is based mainly on commentaries and seeks to give a list of techniques adopted by the commentators and elaborate these techniques as measures of literary criticism employed then.

(iii) One could also comment on a work by preparing adapted/adopted versions of an earlier work.

(iv) One could take a stray poem and discuss it as illustration of a point one wishes to make. This is done generally within a commentary.

3. We shall not go into the reasons why commentaries were caused to be written. The development of the commentary as a genre has a complex history with each stage adding new components and functions to the genre of commentary. But, in essence, as already pointed out, a commentary is a work of criticism of a work already in existence. Most grammars and prosody works define what a commentary is and suggest components that a commentary may have : **urai** is the word used to refer to a commentary and the word is also used to mean speech as well as prose, in addition to its reference to several other attendant and not so attendant matters. The earliest available commentary **Iraiyanaar Akapporul Urai** is a commentary not on the grammar proper in the modern linguistic sense, but on **porul** (a part of it, more correctly speaking) the codification of form, function and sense of literature, and belongs perhaps to the eighth century A.D.

There are commentaries not only on literary works but also on grammatical literatures. The poet himself may write a commentary on his own work. There may be a commentary on another commentary. A commentary may also be in poetic form for a poetic work. Commentaries are generally prose works. They may be on literary works with emotive content, both secular and religious. They may be on didactic compositions. They may be written also on texts in poetic form with no emotive content such as religious philosophical treatises. The origin and development of commentaries in Tamil is closely linked with the evergrowing exploitation of prose as a mode of expression in a language in which the poetic form was practised almost exclusively as the only literary mode. The language and content of the commentaries reveal the dynamics of language communication and of sociolinguistic history of Tamil, much more than the poetic works on which they were written.

4. We shall now identify the structural components of a typical commentary, as veiwed by grammatical works. Although grammatical works differ as to the number and kinds of the components a commentary may have and their progression, there are still overall similarities in the definition they offer. We shall consider what two major works of the 13th century A.D. have to say. According to **Nannuul** (sutra 21), there are fourteen components a commentary may have. These are (i) presentation of the original poem as it is, (ii) a succinct statement on the theme of the poem, (iii) parsing of the words in the poem (presumably line by line), (iv) word by word meaning, (v) a compendium of the meaning of all the words, that is, a straight forward statement of the meaning conveyed by the poem (presumably a statement of the literal meaning as stated in the poem and in the same order), (vi) giving illustrations, (vii) raising questions on the points of the poem, (viii) supplying answers to the questions raised (ix) supply of information and meaning not contained in the sutra in a literal manner; to supply additional meaning and matter wherever appropriate, (x) expansion of what is to be expanded (in linguistic structures and meaning), (xi) demonstration of the fit between the sutra and the chapter in which it occurs, (xii) a firm decision as to the correct meaning of the sutra when alternative meanings are possible, (xiii) indication of the function/usefulness of the sutra, and (xiv) presentation of quotable quotes from respected authors. Some have interpreted the above fourteen components as fourteen types of commentaries.

Another work of the same century, **Nampi Akapporul Urai** (Commentary for sutra 1), presents a less programmatic short list of components of a commentary. These are as follows:

(i) A succinct and brief statement of the inner meaning of the sutra or the poem, more or less a statement on the theme.

(ii) Word by word meaning of the sutra/poem.

(iii) A compendium of all the meanings of all the words, resulting in a straight forward statement of the meaning of the sutra/poem.

(iv) Raising questions and supplying answers on matters not explicitly stated by the sutra/poem and clarifying and purifying the meaning of sutra/poem, involving necessary linguistic analysis of the phrases used in the sutra/poem.

Note that all the major elements of practical criticism resorted to in modern times are found in the above listed activities. Note also that the linguistic analysis of structures employed in the sutra/poem forms an integral part of the commentary. Note also that though the four steps given above are generally followed one after the other in a hierarchical manner, one or more of the steps could be skipped and the order jumbled. Thus there are commentaries which may not have all the above listed components. In fact, the item "word by word meaning" is generally skipped in early commentaries. Generally speaking, we start with a succinct statement, go for a word by word meaning, give a faithful compendium of what is stated and then investigate every detail of the poem for which linguistic analysis is also accepted as an integral tool.

5. Is there a distinction between a commentary made on grammatical sutras and a commentary made on a literary work? A grammatical sutra is more brief than a literary poem. A grammatical sutra, because of its non-literary (non-emotive) content, and because of its brevity, could be more tense. However, a poem, even when having a straight forward narration, could be more difficult in terms of retrieval and interpretation of its meaning. And yet both the forms have been approached more or less in the same manner, thus making no distinction between grammatical and literary commentaries. An analysis of a typical literary commentary by Naccinaarkkiniyar of 14th century A.D. on **Kalittokai** (Kurincikkali, Kurinci 1) reveals the following components: (i) identification of the focal point (theme) of the poem, (ii) giving the meaning of the words/phrases in the same order in which they occur in the text, (iii) giving reasons/relations for the content of the poem, (iv) identification of the poetic form, and (v) giving non-literal, idiomatic meaning (implied meaning) / interpretation for the poem. To do these, the commentator depends on the words, phrases and lines of the text. In other words, he makes use of linguistic analysis for an idiomatic interpretation of the poem. Note that all these, more or less, follow the programmatic step, suggested in both **Nannuul** and **Nampi Akapporul**, listed in section 4.

Since commentaries were written for both literary and non-literary works following the same general scheme, it is indeed difficult to say which of the steps in writing commentaries were meant exclusively for literary works and which others were meant exclusively for non-literary works. Adoption of a common scheme for writing both literary and non-literary commentaries is a pointer to an underlying assumption that literary criticism was identical to any retrieval and interpretation of meaning of a text. There were only general processes, in the application of which the literary processes would have literary variables exploited and non-literary works would have non-literary variables exploited.

6. What is the function of linguistic analysis of the textual items in commentaries? This question has not yet been raised at all although a lead was given by that giant among Tamil scholars U.V. Swamynatha Aiyar (1935),

or perhaps even in the earliest edition of (1894). Aiyar has listed all the grammatical notes (**ilakkaṇakkurippu**) employed by the commentator of **Puṟanaanuuṟu,** (a collection of poems sung in pre-and early Christian era). This list is a mechanical reproduction of grammatical explanations for lexicon, syntactic and semantic as well as prosodic rules and measures employed by the commentator. From here, one could proceed to find out the poetic/literary functions of such grammatical usage in the text and show how such a grammatical usage illumines all literary aspects of the text and enhances its enjoyment. (See below for some suggested functions of linguistic information and analysis for literary purposes.)

A cursory glance of a commentary (Naccinaarkkiniyar's commentary on **Kalittokai)** clearly reveals that the major, if not the only, function of linguistic analysis of the textual items is to arrive at the correct meaning of the text. In this process of arriving at the correct meaning of the text, linguistic analysis has been exploited by Naccinaarkkiniyar for the following purposes;

(i) correct identification and interpretation of nominal compounds and compound verbs.

(ii) correct interpretation of participle constructions.

(iii) identification as to where the finite verb occurs and as to where the next sentence commences in the poem/sutra.

(iv) identification of the deviations in lexicon and grammatical categories and explaining away such deviations on the basis of the import of the poem/sutra.

(v) supply of appropriate case markers.

(vi) identification of the implicational meaning.

(vii) identification of different readings offered to the text and the choice of the most appropriate reading based on linguistic analysis and content.

(viii) indication as to how phonemic changes in forms are to be interpreted and how these changes are related to the implicational meaning of the poem, such as changes involving lengthening/shortening of vowels/ consonants.

(ix) explanation for deviations in number-use of singular for plural and use of plural for singular.

(x) suggestions as to which phrase governs what.

(xi) identification as to which word acts as an independent sentence (identification of single word sentences).

(xii) identification of morphophonemic changes dictated by overall poetic form (the kinds of poetic form) and content, as well as metric subcomponents.

(xiii) identification and showing as to how a particular usage is based on and approved by convention.

A detailed analysis will reveal many other purposes for which linguistic analysis of the textual items is resorted to in a commentary. Note that linguistic information is sought and presented only for those items the non-explanation of which may not illumine the interpretation of the text. Note also that, more often

than not, linguistic analysis is applied on the words, that is, a word-level linguistic analysis is performed on the text. Note also that the commentary follows not only the order of sentences as given in the poem, but also gives these sentences in prose generally in the same structure as found in the poem. If a poem of a certain number of lines consists of, say, only six sentences, the commentary follows not only the order of occurrence of these sentences within that poem, but it also generally contains only six sentences as in the original text. This is facilitated by adopting the same structural complexity of sentences in the poem in the commentary as well, that is, more often than not, participial constructions and constructions with other connectors had been resorted to in the commentary as in the poem. This observation is valid only to poems in which events narrated and the sentences uttered in the poem have a matching sequential occurrence. In poems in which the natural order of events narrated could be retrieved only through a reordering of sentences in the poem, this observation is not valid.

At least four functions can be assigned to a Linguistic analysis of a literary test in modern literary criticism. These are:

(i) identification and retrieval of at least the correct overt meaning of a literary text,

(ii) linguistic analysis to unravel language use for characterization,

(iii) linguistic analysis to retrieve the underlying psychological processes anchored at selected linguistic tags within the text, and

(iv) spatio-temporal placement based on language use.

Of these four, the first function has been ably exploited by the commentators of yore. The other three functions have been explored only occasionally. A list, just as the one we have presented in the beginning of this section, may lead us to posit that all the functions of linguistic analysis as found in modern literary criticism were practised by the commentators in Tamil. Such a conclusion, however, is not warranted and justified because there is some difference in the tenor of the use of these elements and in the combination and frequency of exploitation of these elements for commentary purposes. Whereas a modern critic may make use of these for a thorough dissection of the text from so many angles, almost to the point that nothing in the text is left to the imagination of the reader, the commentator restricts himself to an illuminative retrieval of the meaning and leaves the experience of enjoying and assessing the text to the reader.

7. We have already listed the following as literary criticism-like activities of the commentators:

(i) giving the focal point, theme, of the poem,

(ii) giving word by word meaning,

(iii) giving a straight forward narration of the poem generally in prose, and

(iv) identifying the idiomatic meaning of the poem, wherever necessary with the help of linquistic analysis.

The retrieval and interpretation of the meaning of the poem is a legitimate literary task. This legitimate task is preceded in the commentaries by an attempt to give word for word meaning for at least selected words. Both are resorted to in modern times for opaque poems which may even by couched in current language. The opacity of the classical and medieval Tamil poems was enhanced by a lapse of time and during this lapse nuances changed

so much as to require interpretation of even individual words. Note, however, that there has been no bar on making commentaries for contemporary works. And yet there are only a few commentaries made on contemporary works - commentaries are written after a lapse of time and most with the express aim of retrieving the meaning for a new generation. The fact that most commentaries are on works of the past and not of the contemporary times brings to light a general trend on the choice of work that could be subjected to literary criticism. That is, (v) only a work of the past and not of the present is subject matter of literary criticism, generally speaking.

In addition to this phenomenon that could be found in many languages with some history, in the case of Tamil, the opacity of a poem seems to have been accentuated also by the distinction maintained all through its history between literary Tamil and spoken Tamil on the one hand and the poetic Tamil and prose Tamil on the other.

The following practices are also noticed:

(vi) The commentaries attempt to identify the specific **tiṇai, tuṟai,** etc, of a poem and locate the poem in their compass. In other words, a function of literary criticism, then, was to assign the poem a classificatory label as well. Where authors were not mentioned, a guess at identifying the author was also made at times.

(vii) The commentaries identify the "beauties" of the poem, the "beauties" generally identified not in relation to the subtly of the expression of the content itself but in relation to some prosody/grammar - identified rules/dicta. Intricacies of the content and subtleties of expression are stated as a matter of fact, in almost non-emotive tones and they are seen only in relation to dicta in prosody.

(viii) Identification of the errors. Again these errors are listed ultimately as one of the grammar/prosody-identified errors. (for a list of "errors" and 'beauties', see **Nannuul** sutras 12 and 13) Reference to grammatical/prosodic dicta is all that was made and any discussion of the poem revolves around conditions already set in the grammatical prosodic work.

One could point out only the errors, that are generally few from the point of view of the commentator, and not decry the book in its entirety. This is so because decrying is done at the stage of the choice of a book for commentary purposes, and not after the choice is made. The commentator does not choose a work if in his judgement that work is not worthy of a commentary. Once a choice is made based on his judgement, the governing principles of which are not explicitly stated but intuitively followed and even prescribed perhaps through oral tradition, the commentator is guided and motivated only by the priciple of trust which leads to the assumption that the original author is, indeed, infallible and that when good Homer sometimes nods, the nodding requires to be explained away based on the assumption of infallibility and the principle of trust. Here is a major difference between the practitioners of the literary criticism of the traditional school and of the anarchists of modern times. The dominant anarchism of present day literary criticism is based on mistrust of the author whereas the tradition insisted upon trusting the author. Yet there is a lot of similarity between the commentator and the modern discerning sensitive literary critic. Does not the sensitive literary critic pick and choose from among the mushrooming works of verbal art? He may, however, list reasons why he chose a particular book of verbal art for his act of literary criticism, whereas the commentator of yore would have seen such a listing superfluous,

labouring the obvious, or better still, an intrusion into his private judgements.

Decrying and finding fault was traditionally possible in two ways: One forum was when the newly composed work was presented verbally by the author before an audience of scholars for their approval. Once the approval was obtained, the principle of trust was applied and the work did not have to be subjected to wholesale criticism leading to its rejection. The other forum was when someone wrote a work exclusively to condemn the philosophy of a former work.

(ix) Relating the present to the past, the past works with the present work.

(x) Identification of the form of poetry employed. Indication as to whether it follows the pattern laid down in grammatical/prosodic works, or it has made innovations.

(xi) Identification of the literary genre to which a particular work belongs—whether a particular work is an epic, a didactic work, or an individual stray poem, etc. Indication also as to whether the poet had followed the prosodic definitions governing the components of a literary genre.

(xii) Suggestions and grounds for reordering the lines/words of the poem to retrieve and interpret correctly the meaning conveyed by the poem.

(xiii) Assessment of the various alternative reordering of the lines/words of the poem to arrive at the "correct" retrieval and interpretation of the poem.

The items (xii) and (xiii) are pursued on the basis of grammar and prosody listed in **porulkol**-retrieval techniques. The commentators use them also as a measure of literary sensibility.

(xiv) Identification of **utti** 'technique' employed in the work. At least one grammar lists 32 different kinds of literary techniques (**Nannuul** sutra 14) that could be employed in a literary work. Correct interpretation and retrieval of meaning of a poem is facilitated if one has a knowledge of these techniques. Whether a poem is correctly interpreted is also judged on the basis of the correct identification of the technique employed.

(xv) Giving justification of the deviations/innovations/errors committed by the author. We already suggested that the traditional commentator proceeds on the basis of the principle of trust and on the basis of the assumption that the author whose work he is making a commentary upon is infallible. Based on the priciple of trust and the assumption of infallibility, another major effort pursued, apart from the goal of correct interpretation of the text, is to find and justify why the author had deviated from well-laid dicta of grammar and prosody. The commentator employs the process of justification for all such deviations, innovations and errors. This is called **amaiti kuural.** Justification is offered for grammatical deviations and innovations, for deviations and innovations in the form of the poem, for the deviations and innovations made in the components of a literary genre, for deviations and innovations for words in usage and structure and metaphor, etc. In fact, offering justifications is a chief characteristic of literary criticism in the traditional school.

(xvi) It appears to us that there was, indeed, only a thin distinction between literary criticism and rhetoric in the commentaries. Criticism was rather rhetoric-based only.

(xvii) There was also a thin distinction between literary analysis and literary criticism, the former we take to be mainly a correct reading of the poem, whereas the latter we take

to include not only the correct reading of the poem but also an assessment of the poem in terms of the success or failure of the poet in conveying what he intended to convey.

8. To conclude, one notices various elements of modern literary criticism in the commentaries of yore. While the major aim of the commentator was to retrieve and correctly interpret the meaning, the commentator did not fail to employ other tools and supply information in carrying out his job. However, he restricted himself to an illumination of the test, followed the principles of trust, assumed that author was infallible and left the literary assessment of the work to the private experience of the individuals. He also restricted himself to the well-laid dicta of grammar and prosody and made repeated references to the dicta.

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TRENDS IN THE COMPARATIVE STUDY ON PANINI AND TOLKAPPIYAM

K.Meenakshi

The question of relation between Tolkappiyam, the earliest extant Tamil grammar and the Sanskrit grammatical tradition has been drawing the attention of various scholars. Divergent views proposing the indebtedness of Tolkappiyar to Sanskrit grammarians and vice versa have been expressed by various Indian and non-Indian scholars (cf. Reference).

Some scholars established Tolkappiyar's indebtedness to the Sanskrit Grammatical tradition by observing a few parallelisms between some rules in Tolkappiyam and Sanskrit Grammatical texts. A few others on the other hand, proposed that Tolkappiyar was much earlier than Panini, the ancient Sanskrit Grammarian and established the independence of Tamil Grammar.

P.S. Subramanya Sastri (1934, 1945), a great scholar both in Tamil and Sanskrit showed many parallelisms between Tolkappiyam and various Sanskrit grammatical works and establised Tolkappiyar's dependence on Sanskrit grammars though he himself admits "He (Tolkappiyar) was so clever that the genius of Tamil was not at all interfered with by his knowledge of Sanskrit (preface, p. xxx, 1934).

Prof. Vaiyapuri Pillai (1959: 50) argued that Tolkappiyar had Panini as his model. T.P. Meenakshisundaram (1974:37) claimed that Tolkappiyam was based on Paniniyam and Aindram, a pre-Paniniyam Sanskrit grammar.

Burnell (1875:9) was of the opinion that Tolkappiyam can best be compared with the Aindra School of Sanskrit grammars.

Zvelebil (1973:143:144) writes "The relations between Patanjali, an early sanskrit grammarian and the Tolkappiyam, seems to be well established. It looks as if Tolk. Col. 419 is indeed indebted to Patanjali's classification of compounds into Purvapadartha, Uttarapadartha, Anyapadartha and

Ubhayapadartha. In fact, Tolk. Col. 419 seems to be almost a translation of Patanjalis text." He grants Tolkappiyar's "Indebtedness to Panini." In his later book also, Zvelebil (1975:69 and 71) argues for Tolkappiyar's dependence on Sanskrit grammatical texts.

Some Tamil scholars like Ilakkuvanar (1963), on the other hand, have attempted to establish Tolkappiyar's anterior date and thereby to prove tolkappiyar's independence. He tries to show that some sanskrit texts such as Yaska's Nirukta has been influenced by Tolkappiyam (1963:364),

The views of the most of these scholars are based on secondary sources. We have reason to believe that they have been influenced by the views of Subramanya Sastri, who had the reputation of having a sound knowledge in the grammatical traditions of both Sanskrit and Tamil.

Another trend in this comparative study can be noticed in the attempts made to disprove the views of Subramanya Sastri, by establishing the methodological difference in Tolkappiyam (Agestialingom and Balasubramanyan 1974: Murugaiyan, 1973 etc.,).

The propenents of either view never realised how faulty their arguments were. None of them conducted a systematic analysis of the two grammars in question Finding parallelisms between some rules in some parts of these two grammars will lead us nowhere. The similarities might be due to the borrowing from each other or it might be due to a pure coincidence. What is lacking in all these works is a systematic, unbiased and exhaustive analysis of the grammars in question, followed by a comparative analysis of the methodologies adopted by these two grammarians.

The task of making such a comprehensive and systematic analysis will involve much time and the finished product will turn out to be voluminous one.

Recently, a few scholars have been making attempts in this direction. Singh and Doraiswamy (1974:423) compared the cases in Tolkappiyam and Panini and arrived at the conclusion "there is fundamental difference in the approach of the two grammarians. For Tolkappiyar, inflectional endings and the syntactic relationships are one and the same thing. Panini however, views these as two distinct phenomena, as abstract entity and its representation in concrete."

Rajam (1981) has made an attempt in this direction confining her study to the areas of phonetics, phonology and morpho phonemics. She has chosen for her study, Tolkappiyam representing

Tamil grammatical tradition and the Rk and Taittiriya Pratisakya, Apisali-Siksa and the Astadhyayi, representing sanskrit tradition. She finds some similarities and differences into methods of description between Tolkappiyam and the sanskrit texts considered here and comes to the conclusion that these two systems represent two different grammatical traditions.

Meenakshi (1971, 72a, 72b, 73, 76, 80, 81) has been making a comparative study of the common categories described in the two grammars involved. The categories compared so far are nouns, declension, compounds, cases, Sandhi, and Finite verb. The author in this comparative study, presents first the treatment of each one of these categories in individual grammar and then their method of description has been compared. The comparative study made so far, shows that some characteristics are being shared by these two grammarians and that some others differ significantly, The findings of this study can be summarised as under:-

1. The formulation of the rules in Astadhyayi is different from that of Tolkappiyam. Panini's rules are in sutra style. Panini has invented a few devices such as Sivasutras, Pratyahara sutras etc., in order to effect brevity. His metalanguage itself is indicative of the method of interpretation of his rules. For instance, in the (substitution) rules, he makes use of a locative, genitive and ablative. Genitive for the element to be replaced, ablative as the element after which the operation takes place and locative as the element before which the operation takes place, e.g. ikoyan aci (p.6.I.77) meaning for ik (genitive), yan (nominative) is substituted before ac (locative).

Panini's metalanguage contains virtually no verbs.

Tolkappiyam sutras do not involve such procedures. His metalanguage is not an unreal abstraction.

2. The organisation of the contents in Tolkappiyam is topic-wise whereas Panini adopts a different method.

3. Tolkappiyar devotes one full section for the treatment of phonology, whereas Panini discusses only those rules relating to phonology which are relevant for the description of the language.

4. Sandhi rules, Panini treats both internal and external Sandhi, whereas Tolkappiyar mainly deals with external Sandhi. Tolkappiyar's arrangement of the rules differ from that of Panini's. The former arranges the rules in the alphabetical order of the final letter of the first word. This arrangement resulted in the repetition of a

number of rules. Panini employs indicatory sounds (it) to refer to group of sounds or other linguistic expressions which participate in Sandhi processes. Tolkappiyar on the other hand does not make use of such devices.

Panini's rules are substitution rules, i.e. a process by which a particular sound is said to have been replaced by another. Tolkappiyar on the other hand, discusses the process in terms of particular sound or linguistic item becoming another.

Compounds

Tolkappiyar names the compounds on the basis of the meaning denoted by them as Verrumaittokai, Panputtokai etc., Panini's on the other hand, is purely technical as tatpurusa, karmadharaya etc., Panini discusses the formation of each compound in detail by mentioning the position of occurrence of its constituents, the meaning denoted by them, the accentuation etc.. whereas Tolkappiyar simply defines them.

Cases

Panini describes cases under Karaka and Vibhakti; the former denoting the relationship between noun and Verb and the latter denoting the case markers. According to Panini there are eight Vibhaktis and six Karakas. He makes the distinction between the morphological markers and the syntactic relation shown by them, by describing the cases under Karakas and Vibhaktis. There is a fundamental difference between Panini and Tolkappiyam in their approach in the description of cases. For Tolkappiyar the inflectional endings and syntactic relation shown by them are one and the same thing.

Verbs

The Verbal system in sanskrit is more complicated compared to simple system of Tamil. Both Panini and Tolkappiyar share some characteristics in the treatment of verb. However, Panini's treatment is more comprehensive and exhaustive, whereas Tolkappiyar fails to describe certain linguistic items such as the tense morpheme, causal suffix etc.

These differences are very crucial and they establish the fact that Tolkappiyar had definitely not adopted the method followed by Panini. If he had Astadhyayi as model, the entire Tolkappiyam might have been structured in a different manner.

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The Place of Grammatical Relations in Language Description

K. RANGAN

Introduction

From a recent conference that was conducted in 1979 at the campus of the University of Wisconsin, Milwaukee, U.S.A., we come to know that there are 14 varieties of syntactic theories available at present[1]. Of course, one may dismiss some of the theories describing them as notational variants. Since I am not familiar with many of these theories, I do not see any justification to claim that the theory I am advocating below is the only one which describes the language successfully. People of my generation and seniors too might have felt that the life span of many syntactic theories was too short. The one who rigorously defends a particular theory gives up that theory within no time. One gets a confused picture of linguistic scene at present. Linguists of my generation who were introduced to the theory of transformational generative grammar around 1965 and who nourished the hope of having achieved a coherent model to describe the structure of language found their hope to become an illusion. Probably I present a gloomy and pessimistic outlook of the present state of syntax. However we may look at the entire development (if we could be permitted to use the word 'development') from a different angle and learn a lesson from it[2]. Instead of attaching much importance to the appearance or disappearance of a model, we may look for the insights provided by a particular model. The insights may probably be incorporated in other models also. For me the significance of a model does not lie on its life span but rather lies on the insight or explanation it offers to understand the nature of language. I should confess here that my knowledge in Relational Grammar (RG) is severely constrained because much of the literature remains underground and not accessible to me.

The goal of linguistic theory is to characterize precisely the essential properties of human language. It is concerned with the construction of a comprehensive general theory of the

1. The proceedings of this conference has been published by the Academic Press. It has come out as *Syntax and Semantics, Vol. 13: Current Approaches to Syntax* edited by Edith A. Moravcsik and Jessica R. Wirth (1980)

2. Probably one may believe that linguistics is struggling to become a matured science. The other way one could develop the optimistic outlook about the present state of linguistic science is that it is the nature of all social sciences to have different schools of thought. There is no need to interpret the present state of our art as the sign of weakness of the discipline or a particular school of thought.

structure and organization of language. In other words, it attempts to characterize the properties of universal grammar (UG). The hypothesis that languages differ in indefinite number of ways is uninteresting and unrevealing.

The theory, as Perlmutter (1980 : 195) puts it, has to explain in what ways do natural languages differ, and in what ways are they all alike. In order to explain the fact how natural languages differ, the theory has to characterize the notion "natural language" that defines the class of natural languages. The grammar of an individual language must be adequate and insightful and explain the data from that language.

The adequacy of grammar depends on the range of data it covers and explains. The kinds and range of data that a grammar is supposed to explain are conditioned by the theoretical framework of the grammar. It is the theory that provides the terms to express the generalizations of a particular language. The theory has two duties to perform. First it must be powerful enough to construct an adequate and insightful grammar of individual languages. Secondly it is to provide the means to express the cross linguistic generalizations i.e., the theory is expected to have the devices by means of which the essential properties of human languages are stated.

Within the framework of Structural Linguistics it is assumed that each language has its own structure. Any similarity between L_1 and L_2 is described either in terms of genetic relationship or accidental. In some cases the similarity may be due to the contact between L_1 and L_2. No plausible explanation is available within this theoretical framework when one comes across certain similarities between L_1 and L_2 which are not genetically related and not spoken in geographically contiguous area.

Relational Grammar – An Overview

Dissatisfaction with the Standard Theory (ST) led the followers in the transformational generative grammar camp to propose alternative theories. One such theory which I would like to examine here is the Relational Grammar (RG) proposed by Perlmutter and Postal (1974) recently. The main thrust of this theory is to show the role of relations in linguistic theory. The ST claims that the transformational rules operate exclusively on the abstract structures represented in terms of formal/structural categories such as S, NP, N, V etc. The rules are not sensitive either to the semantic aspects or grammatical functions of the categories. The Case Grammar and Generative Semantics take an extreme position that the transformational rules are sensitive to the semantic aspects of the categories. The Relational Grammarians argue that the rules are sensitive to the relations (both semantic and grammatical) and a number of significant generalizations can be captured only when the relations are primitive in linguistic theory and not derivative as in the ST.

The traditional grammars have recognized the grammatical relations for the purpose of description. The relationship between active sentence and passive sentence is described in terms of grammatical relations. Jespersen

(1955 : 104) describes the relationship between active and passive sentences in terms of the following formula.

$$S \quad V_a \quad O \;=\; S \quad V_p$$

1. Jack loves Jill   Jill is loved by Jack (O)

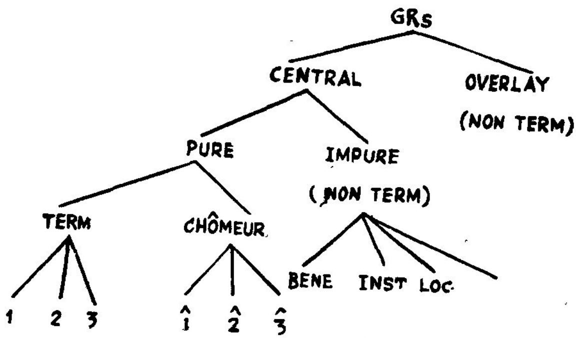
Jack : $S^a = O^p$

Jill : $O^a \doteq S^p$

One of the ways to capture the relationship between these sentences is to make statements which use the concepts of grammatical relations. A significant achievement of the transformational generative grammar is its attempts to make explicit and formal statements expressed in informal statements in traditional grammars. It has often been pronounced that the transformational generative grammar is a kind of explicit formulation of the generalizations expressed in traditional grammars. Though the attempt is toward that direction, it is not complete in its achievement.

First I will present an outline of Relational Grammar.[3] The Relations are divided into two kinds : (i) PURE and (ii) IMPURE. TERM and NON-TERM are also used in the place of pure and impure relations. The grammatical relations like BENEFACTIVE, INSTRUMENTAL, LOCATIVE, etc. are NON TERM or IMPURE relations. These non term relations have independent semantic content unlike the term relations like SUBJECT, OBJECT, etc. Sentence is viewed as a network of these relations. The following presents a simplified diagram of relations.

2.



1. Subject	1. Chômeur
2. Direct Object	2. Chômeur
3. Indirect Object	3. Chômeur

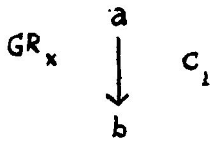
I will explain some of the terms used in RG before I take up the rules and constraints formulated. The relations presented in the above diagram are R-signs. In addition to these relations the following kinds of primitive linguistic elements are required in linguistic theory (Perlmutter 1980 : 190)

3. The presentation of this section is mainly based on the class notes of David Perlmutter who gave a course on Relational Grammar in 1976 at MIT and his article on Relational Grammar appeared in *Syntax and Semantics*: *Vol. 13* (1980).

3. (a) a set of nodes representing linguistic elements

(b) a set of co-ordinates to show the levels at which elements bear grammatical relations to other elements.

The relationship of an element with other element is shown as follows in RG framework.

4. 

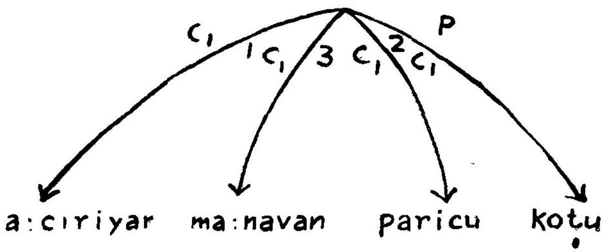
class of possible linguistic levels and constraints on the possible combinations of these elements in relational networks (RNs).

Let us take some sentences from Tamil and see how they are described in RG framework.

5. a : ciriyar ma : ṇavan-ukku
teacher student–to

oru paricu koṭu-tt-a : r
a prize give–past–PNG

'the teacher gave a prize to the student'



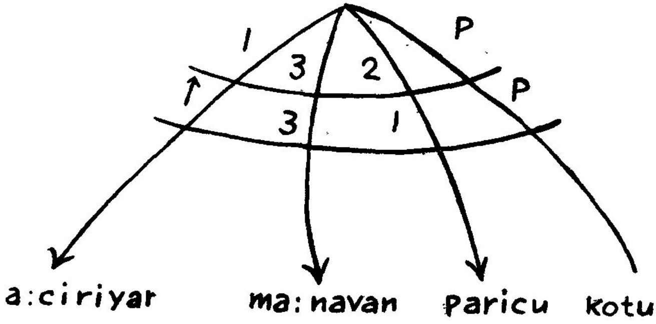
GR_x represents the grammatical relation of the element *b* with the element *a*. C_i indicates the stratum at which GR_x is shown. *a* is the HEAD of the arc and *b* the TAIL. A complete account of clause structure, as Perlmutter (1980 : 199) puts it, has to specify the class of linguistic elements, the class of primitive grammatical relations, the

The stratum C_1 may be represented by a line as shown in the following diagram of the corresponding passive sentence.

7. oru paricu ma : ṇavan–ukku
a prize student-to

a : ciriyar–a : l koṭukka (p)–paṭ–ṭ–atu
teacher–by give–pass–past–PNG

'A prize was given to the student by the teacher'

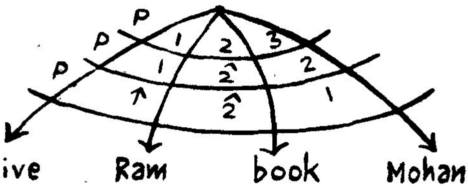
8. 

The same information may be given in a stratal matrix also.

9. a:ciriyar ma:ṇavan paricu koṭu
   1 3 2 P
   $\hat{1}$ 3 1 P

Sentence (10) from English is represented as follows.

10. Mohan was given a book by Ram



The initial stratum of (10) is P 1 2 3. In the next stratum the rule changes the relation 3 to 2. i.e, Indirect Object (IO) becomes Direct Object (DO). 2 of the initial stratum loses its grammatical relation and becomes a chômeur. In the third stratum 2 becomes 1.

Chômeur Relation

A nominal is said to be in chômeur relation when it ceases to bear any relation with other element. Consider the following sentences

11. John presented a book to Mary
    1 V 2 3

12. John presented Mary a book
    1 V 2 $\hat{2}$

$\hat{2}$ indicates that the Direct Object of the initial stratum becomes a chômeur. Similarly in passive construction the subject of the initial stratum is put in chômeur relation.

13. Mary saw John
    1 V 2

14. John was seen by Mary
    1 V $\hat{1}$

The Relational Annihilation Principle (RAL) formulated by Perlmutter and Postal states that 'when an NP, NP_i, assumes the grammatical relation G born by another NP, NP_j $(i \neq j)$ then NP_j ceases to bear G and in chômage' (Johnson 1977 : 55) The NP *Mary* in (12) assumes the grammatical relation of *book* and as a consequence of this the nominal *book* ceases to bear any GR with other element. Similarly the nominal *John* assumes the GR of *Mary* in (14) and *Mary* is put in chômeur relation.

Let us discuss the necessity of having such a relation in a theory of grammar. Does it help us to understand the nature of language ? Are there data which may be explained in terms of this concept ? I will attempt here to show how this concept offer explanation in some data in Tamil and in other languages.

15. ci:ta: toṭṭi–(y)–il ni:r–ai
    Sita tank–in water–acc
    nirapp–in–a:ḷ
    fill–past-PNG
    'Sita filled water in the tank'

From (15) the following relative clauses may be formed

16. toṭṭi(y)-il ni:r–ai
    tank–in water–acc
    nirapp–i(y)–a ci:ta:
    fill–past–ple.m Sita
    'Sita who filled water in the tank'

17. ci:ta: toṭṭi(y)-il nirapp-i(y)-a ni:r
Sita tank-in fill-past-ple·m water
'the water which Sita fill in the tank'

18. ci:ta: ni:r-ai nirapp-i(y)-a toṭṭi
Sita water-acc fill-past-ple·m tank
'the tank in which Sita filled water'

From these examples, we generalize that in Tamil the subject NP, the object NP and locative phrase can be relativized. Consider the sentence (19) related to (15)

19. ci:ta: toṭṭi(y)-ai
Sita tank-acc
ni:r-a:l nirapp-in-a:ḷ
water-with fill-past-PNG
'Sita filled the tank with water'

The locative phrase *toṭṭiyil* in (15) becomes 2 in (19) and 2 of the initial stratum chômeur in (19). This may be shown as

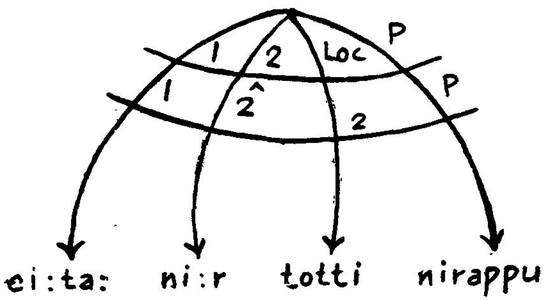
22. ci:ta:ni:r-a:l nirapp-i(y)-a toṭṭi
Sita water-with fill-past-ple·m tank
'The tank which Sita filled with water'

23. *ci:ta: toṭṭi(y)-ai nirapp-i(y)-a ni:r
Sita tank-acc fill-past-ple·m water
'The water with which Sita filled the tank'

It appears that since the nominal *ni:r* ceases to bear any grammatical relation with other element, it resists to undergo the process of relativization. It is possible to hypothesize tenatively that the nominal of chômeur relation does not undergo relativization. This observation may further be strengthened by the following data in Tamil.

24. amerikka: viyaṭna:m-ai(t)
America Vietnam-acc
ta:kk-i(y)-atu
attack-past-PNG

20.



Both *ci:ta:* and *toṭṭi* may undergo relativization because they are 1 and 2 in the final stratum.

21. toṭṭi(y)-ai ni:r-a:l nirapp-i(y)-a
tank-acc water-with fill-past-ple·m.
ci:ta:
Sita
'Sita who filled the tank with water'

'America attacked Vietnam'

25. viyaṭna:m-ai(t) ta:kk-i(y)-a
Vietnam-acc attack-past-ple.m
amerikka:
America
'America that attacked Vietnam'

26. amerikka: ta:kk-i(y)-a viyatna:m
America attack-past-ple·m Vietnam
'Vietnam which America attacked'

The active sentence (24) allows both the subject and object nominals to be relativized. Consider the corresponding passive sentence.

27. viyatna:m amerikka:(v)-a:l
Vietnam America-by
ta:kka(p)-pat-t-atu
attack-pass-past-PNG

'Vietnam was attacked by America'

28. amerikka: (v)-a:l ta:kka (p)-pat-t-a
America-by attack-past-ple.m
viyatna:m
Vietnam.

'Vietnam which was attacked by America'

29. *viyatnam ta:kka (p)-pat-t-a
Vietnam attack-pass-past-ple.m
amerika:
America

'America by which Vietnam was attacked'

(29) is rejected as ungrammatical. Since the Direct Object NP of the initial stratum assumes the subject relation in the final stratum, the subject NP of the initial stratum becomes a chômeur in the final stratum. As predicted earlier, the passive sentence allows the subject NP to be relativized but not the NP which is in chômeur relation.

Similar situation is found in Indonesian language also (Chung 1976)[4]. Direct Object is relativized in Indonesian language with complementizer *yang*.

30. ali membawa surat ini
Ali TRANS/bring letter this
kepada saya
to I

'Ali brought this letter to me'

31. surat yang ali bawa kepada saya
letter that Ali bring to I

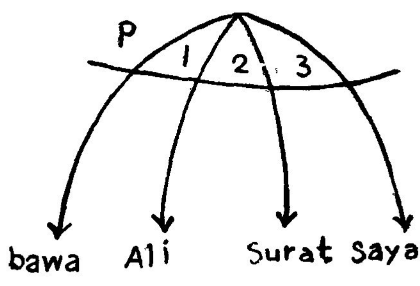
'the letter that Ali brought to me'

Sentence (32) is synonymous with (30). It is not possible to relativize *surat* with *yang* in that sentence.

32. ali membawakan saya surat ini
'Ali brought me this letter'

*33. surat yang ali membawakan saya
'the letter that Ali brought me'

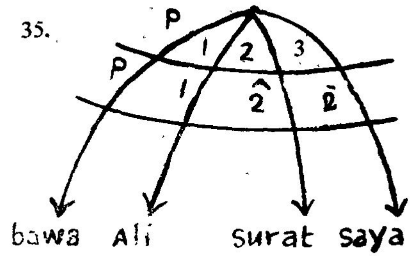
34. represents the sentence (30) in RG network.



4. These data are drawn from Perlmutter (1980 : 216–217)

35. represents the network of (32)

35.



In the final stratum *surat* is $\hat{2}$ and therefore it is not accessible to relativization. Since *surat* is 2 in (30) relativization of 2 is possible. Both in Tamil and in Indonesian language the concept of chômeur explains why some of the nominals are not accessible to the process of relativization.

Perlmutter (1980: 219–222) has drawn some data from Swahili and attempted to explain why in some cases the Verb Agreement rule with the DO fails to apply. Swahili has the following Verb Agreement Rule:

36. The verb agrees with the noun class of the nominal heading a final stratum 2-arc.

37. msichana a-li(*u*)-fungu-mlango
girl 1-PST-2 open-INDC door
'The girl opened the door'

-u- is the agreement marker that agrees with DO *mlango*. Swahili has a rule which advances 3 to 2.

38. johni a-li-m-p-a
john 1-PST-2-give-INDC
makunga zawadi
nurse present
'John gave the nurse the present'

The marker-*m*- indicates that the agreement is between the verb and the nominal *mkunga*. Perlmutter (1980;220) reports that Comrie has observed that agreement with notional 2 is impossible in (38). It is observed further that *mkunga* passivizes naturally while *zawadi* does not. Comrie makes the observation that *no DO agreement is possible* in passive sentence.

39. mkunga alipewa zawadi na johni
'The nurse was given the present by John'

The RN of (38) and (39) may be shown as

40. P johni zawadi mkunga
P 1 2 3

P 1 $\hat{2}$ 2

41. P johni zawadi mkunga
P 1 2 3

P 1 $\hat{2}$ 2

P $\hat{1}$ $\hat{2}$ 1

From the matrics given above, we know that the nominal *zawadi*, 2 of the initial stratum, becomes $\hat{2}$ in the final stratum. (36) states that the verb agreement is with the nominal heading a final stratum 2–arc. Since the nominal *zawadi* looses its relation, it is not qualified to function as a controller to trigger the Verb Agreement Rule.

The data we examined from Tamil, Indonesian and Swahili indicate the gap in the description. This gap could successfully be explained if the theory of language incorporates the notion chômeur relation in its description.

Rules in RG

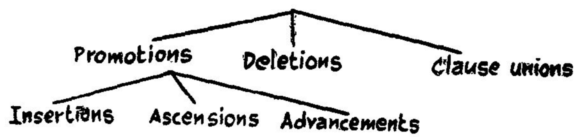
Rules may be classified into two kinds: (i) those that change the grammatical relations and those (ii) that do not change the grammatical relations. Rules such as passive, dative movement and Subject–to-Object raising alter the grammatical relations of the nominals whereas rules such as verb agreement, case assignment, reflexivization, etc. do not alter the grammatical relations. Within the framework of RG, the rules that change the grammatical relations are classified into three. They are promotions, deletions, and clause unions. Promotion rules are further sub-classified into insertions, ascensions and advancements. They may be shown as

43. ma : tavi ko : valan-ai (k)
    Madhavi Kovalan-acc
    kavar-nt-a : ḷ
    attract-past-PNG
    'Madhavi attracted Kovalan

The nominal *ma:tavi* which is 2 is advanced to 1 in (43). The rule that has altered the grammatical relation of the nominal from 2 to 1 is an advancement rule. Predicate raising is an ascension rule which involves the replacement of some NP, the Host, which is a term of a given clause, by another NP which is part of the host (Johnson 1977 : 155). Quantifier Floating is an ascension rule.

44. All of the boys are here ⟶

45. The boys are all here



All advancements are clause-internal and ascensions may be clause-internal or cross-clause. Advancements are cases where a given NP holding a particular grammatical relation GR_i to V_x assumes another grammatical relation GR_j where $GR_j < GR_i$ on the relational hierarchy.

42. ko:valan ma:tavi(y)-a:l
    Kovalan Madhavi-by
    kavara(p)-paṭ-ṭ-a:n
    attract-pass-past-PNG
    'Kovalan was attracted by Madhavi'

The corresponding active sentence is

Relational Hierarchy

There are two ways when one attempts to formulate universal hypothesis. One may study a particular language and formulate an universal hypothesis which could be tested later by studying other languages. The alternative approach is to study certain number or kinds of languages to formulate an universal hypothesis. Keenan and Comrie (1977) surveyed different languages and formulated a hypothesis called Accessibility Hierarchy (AH). Chomsky (1973), on the other hand proposes universal conditions on the basis of data drawn from English. The RG claims

that the grammatical relations form a hierarchy and a number of significant generalizations which are universal could be expressed only by a theory which incorporates the notions of grammatical relations.

Relativization

Let us examine some of the processes like relativization, subjectivization, reflexivization, and passivization briefly. Keenan and Comrie (1977) surveyed the relative clause formation (RCF) in over forty languages and proposed the following hypothesis.

46. If, by means of RCF a language can relativize an NP holding position X on the Accessibility Hierarchy (AH), then it can relativize NPs holding position higher than X on the AH: S ≥ DO ≥ IO ≥ OO possessor – NP ≥ Object of Comparative particle.

In Tamil we have the following relative clauses.

47. na:n avan–ai(p) pa:r–tt–a *kaṭai*
I he–acc see–past–ple.m shop
'The shop in which I saw him'

48. tampi paḷatt–ai
brother fruit–acc
veṭṭ–i(y)–a katti
cut–past–ple.m knife
'The knife with which the brother cut'

The underlying structures of (47) and (48) are

49. na:n *kaṭai(y)–il* avan–ai(p)
I shop–in he–acc
pa:r–tt–e:n
see–past–PNG
'I saw him in the shop'

50. tampi *katti(y)–a:l* paḷatt–ai
brother knife–with fruit–acc
vaṭṭ–in–a:n
cut–past–PNG
'The brother cut the fruit with a knife'

The NPs *kaṭai* and *katti* are in LOC and INST relations in (49) and (50). The AH hypothesis predicts that when an NP holding position LOC or INST is relativizable, then the NPs holding the TERM relations are also accessible to the process of relativization. In Tamil, the nominals holding the TERM relations are also relativizable.

51. na:n cen–ṟ–a *u:r*
I go–past–ple·m village
'The village to which I went'

52. na:n kaṇ–ṭ–a *amerikka:*
I see–past–ple·m America
'America which I saw'

53. tu:ṅk–i(y)–a *kuḷantai*
sleep–past–ple·m child
'The child that slept'

The nominals *u:r*, *amerikka:* and *kuḷantai* are in IO, DO and S relations in the underlying sentences.

54. na:n u:r–ukku(c) cen–ṟ–e:n
I village–to go–past–PNG
'I went to the village'

55. na:n *amerikka:(v)–ai(k)*
I America–acc
kaṇ–ṭ–e:n
see-past–PNG
'I saw America'

56. *kuḷantai* tu:ṅk–i(y)–atu
child sleep–past–PNG
'The child slept'

Reflexivization

One may observe similar hierarchy in grammatical relations (RH) in the process of reflexivization also. The constituent which triggers reflexivization is the CONTROLLER and the constituent which undergoes reflexivization is the VICTIM. Let us examine the following sentences in Tamil.

57. ra:man *tan(n)–uṭane:(y)e:*
Raman self–with–emph
pe:ci(k)–koḷ–kiṟ–a:n
speak–refl–pres–PNG
'Raman speaks with himself'

58. ariñarkaḷ eppoḷutum
scholars always
taṅkaḷ–itame: (y)e:
selves–loc–emph
tavaṟu kaṇṭu–koḷ–kiṟ–a:rkaḷ
fault see–refl–pres–PNG
'The scholars find fault with themselves'

59. kaṇṇan *tanakk–a:ka* oru pustakam
Kannan self–for a book
va:ṅki(k)–koṇ–ṭ–a:n
buy –refl–past–PNG

The nominals *tannuṭane:ye:*, *tankaḷiṭame:* and *tanakka:ka* hold the grammatical relations SOC, LOC and BENE respectively. The relational hierarchy (RH) predicts that the nominals holding the relations DO and IO may also be reflexivized.

60. kamala: *tanakku* oru puṭavai
Kamala self–for a sari
va:ṅki(k) koṇ–ṭ–a:ḷ
purchase–refl–past–PNG
'Kamala bought a sari for herself'

61. ka:nti *tan(n)–ai(y)–e:*
Gandhi self–acc–emph
varutti(k)–koṇ–ṭ–a:r
torture–refl–past–PNG
'Gandhi tortured himself'

The controller which triggers reflexivization is the nominal holding S relation. A related condition is that the nominal which triggers reflexivization must be higher on the hierarchy than the nominal that is reflexivized. We find that the controller is a subject and the victim is a non subject.[5]

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5. In English we have sentences in which the controller is a non-subject (Johnson 1977 : 166)

John talked *to Mary* about herself
John sold *the girl* to herself
John crossed *the wire* over itself

However the controller is higher on the rank than the victim.

Subjectivization

The RH predicts that 'if, in a language L, an NP, NP_i which holds a grammatical relation say OO can be advanced to subjecthood then in L other NPs which hold TERM relations may also be advanced to subjecthood'. Different languages may follow different strategies. In Tamil we have examples to show the advancement of 2 to 1. In passive sentences, the 2 of the initial stratum is advanced to 1. But in Japanese one has both 3 → 1 and 2 → 1.

62. John–ga Mary–ni hon–o
John–sm Mary–io book-do
atae–ta[6]
give–past
'John gave a book to Mary'.

63. Hon–ga John–ni (yotte)
book–sm John–sc
Mary-ni–atae–rare–ta
Mary–io give passive–past
'A book was given to Mary by John'.

64. Mary–ga John–ni (yotte)
Mary–sm John–sc
hon–o atae–rare–ta
book–do give passive–past
'Mary was given a book by John'.

In (63), 2 becomes 1 and in (64) 3 is advanced to 1.
In Malagasy 00 → 1 is also possible.

65. atolo–dRasoa
is offered by
an–dRakoto–ny–vary
Rosoa to Rakoto the rice
'The Rice is offered to Rakoto by Rosoa'

66. toloran–dRasoa
is offered by
ny–vary Rakoto
Rasoa the rice Rakoto
'Rakoto is offered the rice by Rasoa'

67. nividianan'ny vehivavy ny vary
bought by the woman the rice
ny ankizy
the children
'The children were bought the rice by the woman'

In (65) 2 is advanced to 1. In (66) and (67) 3 and nonterm relation are advanced to 1. The hypothesis may be falsified if there is a language L in which the NPs holding the NON TERM relations can be advanced but not the NPs holding TERM relations. This is true with the NPs which are advanced to 2 also.

Passivization

Chomsky (1957) formulates the passive rule for English as

68. NP_1 — AUX — V — NP_2 →
NP_2 – AUX – be+en–V–by+NP_1

He (Chomsky 1965) later revised and introduced the manner category which is expanded as *by passive*. The structural description on which rule operates is given as

69. NP–AUX–V–...NP–... by Passive
(△ cannot contain NP)

The NP which is to the left of V is moved and inserted where the dummy is.

6. The data of this section are drawn from (Johnson 1977 : 160)

under passive marker. The NP which immediately follows V is moved and inserted in the place from where the deep structure NP is moved. So passivization as a syntactic phenomenon in English may be described as a process of the operation of two movement rules. That is, one rule postposes the agent NP and the other preposes NP. The linear order of the constituents in both the active and passive sentences is different.

The passive sentences in Tamil are derived by the application of movement rules (Agesthialingom 1969). But to my knowledge I do not find any justification or evidence to have movement rules to derive the passive sentences. Consider the following examples from Tamil.

70. raṣya: a:pka:nista:n–ai (t)
Russia Afghanistan–acc
ta:kk–i(y)–atu
attack–past–PNG
'Russia attacked Afghanistan'

71. (a) rasya:(v)–a:l a:pka:nista:n
Russia–by Afghanistan
ta:kka (p) – paṭ-ṭ-atu
attack–pass–past–PNG.

(b) a:pka:nista:n rasya:(v)-a:l
ta:kka (p)–paṭ-ṭ-atu

The native speakers in Tamil accept both the sentences (71 a–b). The rule that moves the constituents in (71 b) is not grammatical but rather stylistic. As far as Tamil is concerned, no evidence is brought to support the claim that movement rules are required to derive the passive sentence. The difference in case marking distinguishes the active and passive sentences. Similar is the case with Hindi also. There is no justification to propose movement rules to derive the passive sentences in Hindi.[7]

72. si : ta : miṭʰai n ə hi : kʰati
Sita sweets not eats
'Sita does not eat sweets'

73. sita-se miṭʰai n ə hi: kʰai: ja:ti
sita-by sweet not eaten is
'The sweets are not eaten by Sita'

74. moh ə n-ne moṭ ə r c ə lai:
Mohan-erg car drove
'Mohan drove the car'

75. moh ə n-se moṭ ə r c ə lai: g ə i:
Mohan-by motor was driven
'The car was driven by Mohan'

For most of the Indian languages, passivization does not require movement transformations. The formal difference between active and passive sentences is signalled not in terms of word order but rather in terms of different case markings. Does it imply that the process of passivization in Tamil and other Indian languages is not syntactic? In English it is described as a syntactic phenomenon by the movement rules. It seems that within the theory of transformational generative grammar there is no way to show passivization as a syntactic phenomenon in both English and Tamil. Even in languages in which

7. These data are drawn from Kachru (1966)

the process of passivization is syntactic the transformational rules are different in the way they disturb the order of constituents. It has been shown that how the passive rules differ from language to language eventhough the rules are FUNCTIONALLY IDENTICAL.[8]

It is possible within the framework of RG to show passivization as a unitary phenomenon in natural languages. The rules formulated are

76. DO $(Y, V_i) \longrightarrow S\ (Y, V_i)$

77. S $(Z, V_i) \longrightarrow \hat{S}\ (Z, V_i)$

There are two rules which derive the passive sentences. Rule (76) advances 2 to 1 and rule (77) demotes 1 to 1.

Since the transformational rules operate on the constituents whose linear order is language–specific, it is difficult to capture the underlying unitary aspect of the process.

Defining Grammatical Relations

The ST defines the grammatical relations of the constituents at the level of deep structure. These informations are required for the rules of semantic interpretation. The NP which is immediately dominated by S is the 'Subject-of, the sentence and the NP immediately dominated by VP is the 'Object of' the sentence. The configurational definitions given above are required for those languages in which the subject NP and the object NP are not morphologically marked and as a consequence of this the word order in those languages is relatively rigid. In a language like English the subject NP and the object NP are unmarked and therefore the word order in English is grammatical. But the case with Tamil is different. In Tamil, the object NP is marked and the subject NP unmarked. The word order in Tamil is relatively free.

78. (a) mantiri ne:r̲ r̲u oru ku:ṭṭatt-il
Minister yesterday a meeting-in
pe:c-in-a:r
speak-past-PNG
'The minister spoke in a meeting yesterday'

(b) ne:r̲ r̲u mantiri oru ku:ṭṭatt-il
pe:c-in-a:r

(c) oru ku:ṭṭatt-il ne:r̲ r̲u mantiri
pe:c-in-a:r

(d) ne:r̲ r̲u oru ku:ṭṭatt-il mantiri
pe:ci-in-a:r

The configurational definitions to identify the grammatical relations of the constituents are not required for languages like Tamil. One can identify the

8. Johnson (1974, 1976:39) has shown how passive rules differ from language to language eventhough the rules are functionally identical.

$NP^s{}_1 - V - NP^o{}_2 \rightarrow NP^s{}_2 - NP^x{}_1 - V_p$ (CHINESE)
$NP^s{}_1 - NP^o{}_2 - V \rightarrow NP^s{}_2 - NP^x{}_1 - V_p$ (JAPANESE)
$NP^s{}_1 - NP^o{}_2 - V \rightarrow NP^x{}_1 - NP^s{}_2 - V_p$ (HINDI)
$V - NP^o{}_2 - NP^s{}_1 \rightarrow V_p - NP^x{}_1 - NP^s{}_2$ (MALAGASY)

grammatical relations of the nominals in terms of different case markings. The difference in word order does not play any role in changing the grammatical relations of the nominals. The word order is therefore stylistic in Tamil. The level of deep structure to define the grammatical relations of the constituents is not relevant as far as Tamil is concerned.

It is difficult to extend the configurational definitions of the grammatical relations to languages like Dyirbal, Hurrien, and Aleut. It has been argued by Johnson (1976 : 80) that Dyirbal is 'an Australian language that is basically OSV'. Keenan (1976) observes that Hurrien is a language of OSV word order in the deep structure. Ross (1970) reports that Guy Carden informed him 'that the basic order in Aleut is OSV. Similarly languages with VSO order will also pose problem for the attempt to define the grammatical relations of the constituents in terms of deep structure tree configuration.[9]

Linguistic Generalizations

One of the claims that RG makes is that within its framework a number of significant generalizations which are universal and which substantially reduce the number of possible grammars compatible with linguistic theory may be expressed. Several principles have been formulated by Perlmutter and Postal and Perlmutter (1980:211) presents some six laws of the grammar. One such law is *The Relational Succession Law.* It states that 'an NP promoted by an ascension rule assumes the grammatical relation born by the host out of which it ascends' (Johnson 1977:157). A related principle with this is *the host limitation law,* which states that 'only nominals bearing a term relation can serve as hosts of ascensions' (Perlmutter 1980:211). Let us examine the following sentences in English and Tamil.

79. Tom is likely to win

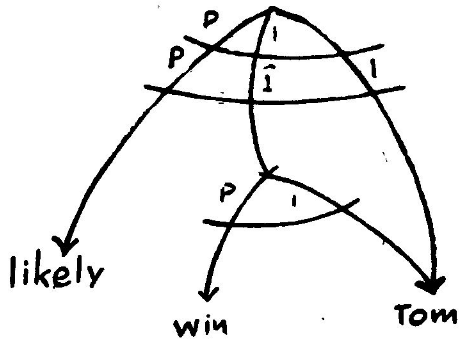
80. I believe the dog to be hungry

81. na:n avan-ai(p) paṭikk-a(c)
    I he-acc study-inf
    con-n-e:n
    tell-past-PNG
    I told him to study

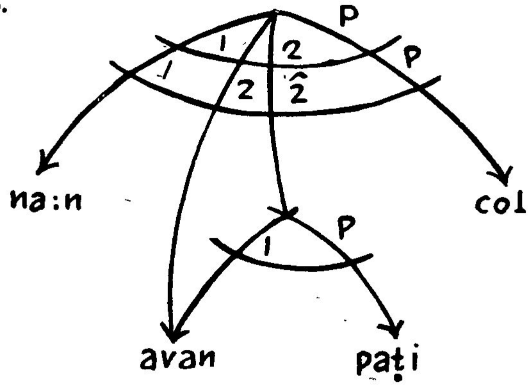
The nominal *Tom* in (79) assumes the grammatical relation 1 which is born by the embedded sentence out of which it raises. In (80) the nominal *dog* assumes the relation 2 born by the embedded sentence. The constituent sentence in (81) holds the grammatical relation 2 and the nominal *avan* assumes the same relation. (82) and (83) show the structure of (79) and (81) in RG network.

9. The way in which the ST may be defended is to propose alternative basic word order for these languages.

82.



83.



Another principle STRATAL UNIQUENESS LAW predicts that for the set of unique clausal GRs, no two columns of the same row in a matrix contain the same value. A comparision of (9), (40) and (41) reveals that there are no two columns in a row containing the same GR. Each stratum is unique in terms of the representation of GR.

Some more principles formulated by Perlmutter and Postal may be explained here (Johnson 1977 : 157).

84. (a) THE AGREEMENT LAW: Only terms can trigger verbal agreement

(b) THE REFLEXIVIZATION LAW: Only terms can trigger reflexivization.

In languages like Tamil, the verb agrees in Person, Number and Gender (PNG) with the subject of the sentence. The features must be compatible between the subject NP and the verb. There are languages like Hindi in which the verb, depending on the language specific conditions, agrees either with the subject or object.

85. wah ro raha:
he(nom) cry be
t^{h}a:[10]
(past, imperfective)
'He was crying'

86. wah kita:b lik^{h} raha:
he(nom) book write be
t^{h}a:
(past, imperfective)
'He was writing a book'

In (85), the verb agrees with the subject constituent *wah* of the sentence. In (87) we may observe that the agreement of the verb is with the object constituent of the sentence.

87. us-ne kita:b lik^{h}i
he-erg book wrote (perfective)
'He was writing a book'

10. These examples are drawn from (J. O. Gray and E. L. Keenan 1977.)

88. ra:m-ne ra:dʰa-ko cʰiṭʰi bʰe:ji:
Ram-erg Radha-to letter sent
'Ram sent Radha a letter'

Some languages may have markers with the verb to denote both the subject and object of the sentence (Refer to examples 37 and 38).

The agreement law predicts that only terms can trigger verbal agreement. It is an empirical and falsifiable claim. Similarly only terms can trigger reflexivization. These claims can be falsified if a language is reported in which the nominal holding NON TERM relation triggers either the verbal agreement or reflexivization. The process of reflexivization involves the principle which predicts that the antecedent nominal controlling reflexivization must be higher on the scale of Relational Hierarchy (RH) than the nominal that is reflexivized. In order to express these generalizations which are cross linguistic the theory must incorporate the cross linguistically viable notions of grammatical relations. Since the theory of RG has a set of cross linguistically viable notions of grammatical relations, it is possible to formulate and express these principles in this framework.

It is observed that in many languages the S of the intransitive clause becomes the DO of the surface causative construction. The S of the transitive clause becomes IO of the surface sentence. This is evident from the following sentences in Tamil and Kannada.

89. *paṭaku* cen-ṟ-atu
boat sail-past-PNG
'The boat sailed'

90. na:n *paṭak-ai(c)* celu-tt-in-e:n
I boat-acc sail-cause-past-PNG
'I sailed the boat'

91. *kuḷantai* co:ṟu uṇ-ṭ-atu
child rice eat-past-PNG
'The child ate the rice'

92. ta:y *kuḷantai-kku* co:ṟ(ṟ)-ai
mother child-to rice-acc
u:ṭṭ-in-a:ḷ
eat-cause-past-PNG
'The mother caused the child to eat the rice'

93. *huḍuga:* sna:na: maḍu-tt-a:ne
boy bath do-pres-PNG
'The boy bathes'

94. na:nu *huḍugan-ige* sna:na
I boy-to bath
ma:d-is-t-i:ni
do-cause-pres-PNG
'I cause the boy to bathe'

95. *magu* aḷu-tt-ade
child weep-pres-PNG
'The child weeps'

96. na:nu *magu-(v)-annu*
I child-acc
aḷ-is-t-i:ni
weep-cause-pres-PNG
'I cause the child to weep'

Since the transformational rules operate on the categories which are linearly sequenced, the rules, describing the same syntactic process in different languages, differ formally. The basic word order determines the form of rules. Many rules which are universal are difficult to be stated within the framework of transformational generative grammar.

Conclusion :

The appearance of transformational generative grammar in linguistic scene cannot be simply viewed as the replacement of a particular model by another model. The change is basic and fundamental. It changes the very paradigm of the discipline. The view that each language has its own structure and languages differ in indefinite number of ways is questioned. The goal of linguistic theory is to characterize the essential properties of human languages precisely and explicitly. Since the child is equipped with certain innate capacity to learn the language to which it is exposed, the human languages differ only in certain predictable number of ways. Both ST and RG share this goal. The difference lies not on the goal they set up but on the terms they use to express linguistic generalizations. The grammatical relations are primitive linguistic elements in RG but they are derivative in ST. The claim of RG is that many significant cross linguistic generalizations can be expressed only by a theory which incorporates the notions of grammatical relations. The validity of RG may be tested by applying to many of our Indian languages. As I remarked earlier, I do not attach much importance to the appearance or disappearance of a model but to the insights it offers to understand human languages.

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ABBREVIATIONS

S = Subject; DO = Direct Object; IO = Indirect Object; SOC = Sociative; LOC = Locative; BENE = Benefactive; INST = Instrument; OO = Oblique Object; L = Language; NP = Noun Phrase; N = Noun; V = Verb; V_a = Verb of the active sentence; V_p = Verb of the passive sentence; S^a = Subject of the active sentence; S^p = Subject of the passive sentence; GR = Grammatical Relation; PNG = Person, Number and Gender; pass = Passive; P = Predicate; acc = accusative; ple.m = Participle marker; TRANS = Transitive; RH = Relational Hierarchy; AH = Accessibility Hierarchy; emph = emphatic; refl = Reflexive; Pres = Present; loc = locative; io = Indirect Object marker; do = Direct Object marker; Sm = Subject marker; SC = Subject chômeur marker; erg = Ergative marker; inf = Infinitive marker; nom = Nominative; $\hat{S}$ = Subject chômeur; CLS = Chicago Linguistic Society.

PROSPECTS FOR THE DECIPHERMENT OF THE INDUS SCRIPT

V.I.Subramoniam

The greatest intellectual challenge in the prehistory of India is the decipherment of the Indus script and a Seminar on this will certainly attract all senior scholars in the field. Braving the unusually hot summer and the long travel, some of the distinguished savants have come to the Tamil University to spend a few days on a problem which has eluded any definite solution. But the hopes for a solution are so strong and the competition so stiff that soon a definitive statement will see light of day and this Seminar is a step towards that direction.

As early as 1944 the Rev.Father Heras delivered a couple of lectures in the Annamalai University on the decipherment of the Mohenjodaro script and his readings though tentative were fascinating. A book on his decipherment was published with subvention from the late Karumuttu Thiagaraya Chettiar of Madurai, Industrialist and lover of Tamil.

While wading through the library of the then Travancore University in 1950, I found a book of Hunter on the decipherment which later led me to read the report of Sir John Marshall and others on the Indus Culture. Though Father Heras was alone in stating that the Indus Script was Dravidian, the presence of Brahui, a Dravidian language in and around the site in Pakistan was not seriously taken by the researchers.

As soon as the Second World Conference of Tamil was successfully conducted in Madras in 1967 a biannual, "The Journal of Tamil Studies" was floated with the late Fr.X.S.Thaninayagam and the late lamented A.Subbiah as Editors and it fell on me in 1970 to edit this journal and the special number on the decipherment of the Mohenjodaro script. By that time, a few dissenting opinions and a few more confirmative evidences on the Dravidian hypothesis were available and the journal was faithful to the scholarly world in publishing all shades of opinion. P.Joseph who long served Fr.Heras as a Research Assistant wrote an article on the decipherment and its later developments. I.Mahadevan had also a long article. Though my interest was intense my reading later was sporadic. A doubt regarding the Dravidian hypothesis continuously plagued me because of the lack of reflexes of the Indus Civilization in Tamil Nadu and in the South.

The volume on Indus Civilization edited by a Japanese team which

included N.Karashima, provided me with a partial answer by pointing out the similarity of potsherds in the ancient monuments in the South. The discovery of the prehistoric painting in Kilvalai near to Villuppuram about 180 kilometres from here, with the Indus writing may provide a missing link. When P.L.Samy and his team showed me the paintings, the importance of their discovery was immediately highlighted and the similarity of human figures in contemporary pottery was also indicated to them.

After a brief visit to U.S.S.R. Dr.Israel of the Madurai Kamaraj University conveyed to me the depression of the Soviet group that their work was not looked into closely by the Indians and their readiness to participate in a Seminar if arranged. The Tamil University undertook to convene the Seminar and I.Mahadevan who is active in the field was requested to arrange for the Seminar. The Soviet team could not make it in spite of several cables and I am sure that they will be convinced that we in India have been more than fair to them by including their contribution for discussion here.

Perhaps one or two points will be in order here before I turn over the ground to others.

Reading through a translation of a German book on the decipherment of the ancient scripts in English, an intimate picture of J.F.Champollion, the child prodigy was available which I want to share with you. At the age of eleven this child had a mastery of six oriental languages besides Latin and Greek. His parents supplied copies of the Egyptian hieroglyphs from the Museum which the young child read by trial and error. The parents and the child went to England where the child's reading was shown to the physicist, Thomas Young who was spending long hours in reading the Rosetta Stone which contained a Greek text along with hieroglyphic and demotic translations. He found the child's reading substantially resembling his, though the former did it intuitively. The successful interpretation of the Rosetta Stone and the identification of the alphabetic, syllabic and ideographic symbols by Champollion showed that a code can be formally interpreted and for its meaning, other evidences--bilingual texts or other helps, are necessary. The formal group among the decipherers of the Indus Script classified the script manually or with a computer and related it to a living or classical language; and assigned the meaning. This procedure has advantages and defects. Because, two different languages spoken in different parts of the globe may have grammatical similarities. But the nearness of Brahui unless otherwise proved to be a later arrival, will rule out other languages found elsewhere in the globe.

Another tag which can help in assigning the symbol a meaning is the description of the culture, the location of the seals on or by the side of objects or places. This will help in making valid guesses. It will be a pardonable axiom if one expects that the Indus script is to describe the Indus cultural objects. Fairservis,Jr. has attempted this in his Allahdino Expedition in 1976. P.L.Samy's discovery of the prehistoric paintings and the autographs in the Indus Script can throw light because the code is matched with an object or meaning. Thus we have Champollion's intuitive

reading, matched later by meaningful evidences, the Finnish, Russian and Mahadevan's arrangement with the use of a computer and later correlating with a grammatically similar living language, in this case the Dravidian, and the others correlating this with Sanskrit, Indo-European and other languages.

What Fr.Heras has with his unerring intuition stated about half a century ago, has now been confirmed by others including Fairservis, Jr. In fairness to others, there is also an opinion which questions the Dravidian hypothesis. The problem becomes more lively because of the difference of opinion and we all know, science advances by honest difference. Tamil University encourages honest and uncommitted difference of opinion, in the interest of knowledge.

TOWARDS A GRAMMAR OF THE INDUS TEXTS: 'INTELLIGIBLE TO THE EYE, IF NOT TO THE EARS'

Iravatham Mahadevan

I. STRUCTURAL AND ANALYTICAL STUDIES OF THE INDUS TEXTS

It might look strange to set out to formulate a grammar for texts written in the still undeciphered Indus Script. Emil Forrer (1932) however demonstrated more than half a century ago that it is possible to acquire an objective comprehension of inscriptions written in an unknown language by observing the parallels with known inscriptions of the ancient world. Such parallels include self-evident ideograms (of deities, commodities etc.), set phrases found in royal proclamations, religious formulae or commercial documents, and also the context of occurrence (on seals, bronze weapons, pottery etc.). As Doblhofer (tr.Savill 1961) notes in his summary of Forrer's work, "a simple comparison of these texts will reveal the signs employed for case-endings, pronouns, personal suffixes, demonstrative pronouns, relative and interrogative pronouns; also the adverbs, prepositions, conjunctions, particle and verb forms--in short, the basic features of a grammar, intelligible to the eye, if not to the ears".

Formal or structural analyses of the Indus texts (as distinguished from attempts at phonetic decipherment) have been carried out by a number of scholars ever since the discovery of the Indus Civilization and its writing. The earlier studies include compilation of annotated sign-lists (Langdon in Marshall 1931; Hunter 1932 and Dani 1963), sign-manuals and concordances (Gadd and Smith in Marshall 1931, Hunter 1934, Vats 1940), studies on direction of writing (Ross 1940, Lal 1961) and notes on individual signs or groups of signs (e.g. Ross on 'numeral' signs, 1938). The most outstanding work in this period is that of G.R.Hunter who provided reliable eye-copies of the inscriptions, a sign-list, a well-arranged concordance and a detailed positional analysis of the signs.

The computer arrived on the scene in the mid-Sixties. A Soviet Group under the leadership of Y.V. Knorozov has published an important series of papers (*Proto-Indica:* 1965, 1968, 1970, 1972, 1973 and 1979) setting out briefly the main results of their computer-aided investigations of the proto-Indian or Indus texts. M.A.Probst wrote the computer programmes for the Soviet Group. Statistical-positional analyses of the texts were carried out by G.V.Alekseev, and A.M.Kondratov. Structural analysis of the texts was undertaken

by Y.V.Knorozov. B.Y.Volchok has concentrated on the interpretation of the iconographic and ideographic motifs on the basis of parallels from the later Indian traditions.

Almost simultaneously, another independent investigation of the Indus texts by using the computer has been undertaken by a Finnish Group, first at Copenhagen and later at Helsinki. Seppo Koskenniemi wrote the computer programmes to develop a method to classify characters of unknown ancient scripts and to compile a concordance to the Indus texts based on pair-wise sign-occurrences in collaboration with Asko and Simo Parpola (1970, 1973). More recently Kimmo Koskenniemi and Asko Parpola have developed the computer programmes to generate a corpus of texts (1979), analysis of duplicate texts (1980) and a revised concordance based on single-sign occurrences (1982). Kimmo Koskenniemi (1981) has also used computational linguistic techniques to study syntactical patterns of the Indus texts. Asko Parpola has dealt with structural problems like direction of writing, word-division procedures, and syntactical analysis of the texts, in addition to his papers concerned with phonetic decipherment and its further implications. (See especially A.Parpola 1970, 1971, 1975, 1976, 1979).

In India, computer analysis of the Indus Script is being carried on from 1971. K.Visvanathan (1973) developed a preliminary computer programme to generate a sign concordance at the Fundamental Engineering Research Establishment, Madras. Later the work was carried on at the Tata Institute of Fundamental Research, Bombay, where Mythili Rangarao and N.Soundararajan developed the computer programmes for generating and photo-composing of the texts, concordance and tables compiled by me and published by the Archaeological Survey of India (1977). A computerised Data base for the Indus Script has been built up at the Tata Institute of Fundamental Research, Bombay, by Mythili Rangarao and Mahadevan (1977; also in this vol.). I have also published the results of my work on the direction of writing and word-division procedures based on the concordance (1980). In recent years another independent computer analysis of the Indus texts (based on the data from the Indian concordance) is being attempted by Gift Siromoney and Abdul Huq (1981, 1982; and in this vol.) at the Madras Christian College.

The most recent structural analysis of the Indus texts is by Walter A. Fairservis Jr. (1977, 1980). He has developed a technique for analysing the texts on a 'grid' in order to bring out the syntactical order and grouping of signs in repetetive formations. His grid demonstrates once again the set order of signs already noticed by the Soviet Group and fully documented in the Finnish and Indian concordances.

Another model of decipherment based on an entirely different concept of structural analysis has been recently proposed by S.R.Rao (1982). He analyses the signs themselves rather than the texts and concludes that the Indus Script consists of only about 60 'basic' signs which possess alphabetic or syllabic phonetic values. I shall pass over in silence many other attempts based on intuition rather than on analysis. The interes-

ted readers will find all the recent attempts to decipher, interpret or otherwise analyse the Indus Script listed in the *Bibliography of recent studies on the Indus Script* (I.Mahadevan and Mythili Rangarao in this vol.). In the discussion which follows I have taken into account only the results of what appears to me the 'mainstream' of structural studies of the Indus Script and the texts.

It will be noticed that in this brief summary of the earlier work on the Indus Script, I have strictly confined myself only to that part which deals with formal or structural analysis of the script and the texts written in it. The very diversity of the phonetic values proposed by scholars demonstrates that we have not yet reached the stage where phonetic decipherment would logically and inevitably follow from structural analysis (as was the case with the grid analysis of the Mycenaean Linear-B Script developed by Michael Ventris). For the moment we can only go ahead with the analytical work, already fairly well advanced, but taking all linguistic speculations, even when based on sound structural analysis, with a large pinch of salt!

I propose to attempt here a preliminary synthesis of the results of structural and analytical studies of the Indus Script, confining myself only to those aspects which do not depend on the identification of the Harappan language, much less on the alleged phonetic values of individual signs. The synthesis will take into account the results achieved by a study of parallels as well as those of statistical-positional analyses of the material available in the Finnish and the Indian concordances. The objective of the exercise is to find out the basic characteristics of the script and the texts on which any valid decipherment has to be based. To put the matter in another way, no attempted decipherment is likely to be true if it contradicts or is not in accordance with the basic findings of the structural analysis of the script and the texts. For the sake of brevity as well as clarity, I shall attempt to formulate the results in the form of an empirical and experimental set of 'rules of grammar' with brief comments on each rule pointing out to the evidence on which it rests. It is proposed at a later stage to test the validity of these 'rules' on the computer and attempt further refinement.

II. CHARACTERISTICS OF THE INDUS SCRIPT

1. The Indus Script runs normally from right to left.

This is perhaps the best established fact about the Indus Script. For detailed justification of the rule, see Marshall (1931:40), Gadd and Smith (in Marshall:410), G.R. Hunter (1934:37), A.S.C.Ross (1940), G.V.Alekseev (in Y.V.Knorozov et al. 1965), B.B.Lal (1966, 1968) and I.Mahadevan (1977, 1980). Walter A.Fairservis Jr. did experiment briefly with a left-to-right direction (1977), but later gave up the idea and has opted for the right-to-left direction (1980), now almost universally accepted.

2. When a line of text runs in the reversed direction, this fact can be usually deduced from the reversal of the 'direction-markers'.

Even a cursory inspection of

the inscriptions reveals that the same text is sometimes written in either direction. (See Vats. p.326 for examples). Hence the general rule of reading from the right cannot be applied mechanically. Failure to understand the criteria for reversal of direction has led even experienced investigators sometimes astray. For example, Heras attempted to 'read' the second lines of texts always from the left, while in fact most of them have also to be read from the right. (Heras, 1953, pp.98, 104, 106, 107). Reversal of the direction of a line of writing is indicated in almost all the cases by the reversal of the "direction-markers", viz., the disposition of the asymmetric signs, the order of the sign sequences and the distribution of the right and left end-signs. For a detailed treatment of this rule, see I.Mahadevan 1977, 1980.

3. The Indus Script consists of word-signs (logograms).

Sidney Smith (in Marshall 1931: 415) analysed some of the seal-texts from Mohenjodaro and found that most of the signs studied by him had meanings by themselves and functioned as words. G.R.Hunter (1934:126) formulated a set of criteria for segmentation of the texts and found that almost every sign of common occurrence functioned as a single word. The Soviet Group (M.A.Probst and A.M.Kondratov in Y.V.Knorozov et al. 1965) analysed texts on the computer and concluded that the Indus Script is essentially morphemic in character, resembling the Egyptian hieroglyphic system in this respect. I have described the logical word-division procedures developed by me (I.Mahadevan 1980), which show that most of the signs of the Indus Script are word-signs.

Almost all the investigators have however also proposed on grounds of probability, taking into account the number of signs, their pictographic appearance and the general resemblance to West Asian pictographic scripts that the Indus Script is most probably a *logo-syllabic* system of writing comprising word-signs and phonetic syllables. This may be true, but it is necessary to emphasise that while it is possible to determine the presence of word-signs in the Indus Script (as may be seen from the foregoing summary of previous work), no one has so far been able to establish by objective analytical procedures the existence of purely phonetic syllabic signs in the Indus Script. Recognizing this difficulty Asko Parpola has recently proposed (A.Parpola 1976 quoting S.Parpola) that the Indus Script is a *morphemo-graphic* system using signs with inherent semantic *and* phonetic values and usable in *either* function.'Morphemo-grams' are defined by him to be "primarily pictograms standing for a sememe whether its semantic or phonetic meaning is intended". He also points out that the West Asian pictographic scripts began as morphemographic systems and later developed into logo-syllabic writing.

4. Word-signs in the Indus Script are formed in three ways, namely as (i) ideograms, (ii) phonograms and (iii) conventional signs.

Ideograms are picture-signs (pictograms) which stand for not only the concrete objects shown in the pictures, but also any idea or concept associated with, or suggested by, such objects. (e.g. the picture of sun may stand for 'sun' as well as 'day'.) Ideograms cannot be phone-

ticised, but in favourable circumstances may be understood directly from pictorial depiction, parallels from other pictographic scripts or from later traditional symbolism or from the context of occurrence. Fairly obvious examples of ideograms in the Indus Script are the anthropomorphic signs (MAN, HORNED PERSON, ARCHER etc.), and the numeral signs 1 to 9 (depicted by short strokes arranged in one or two tiers). However it needs to be emphasised that there is still no unanimity of view on the recognition of individual picture-signs or their ideographic meanings.

Phonograms are also picture-signs depicting concrete objects; but these are phonetic signs whose values are derived by the rebus technique from homonyms of the words represented pictorially. (e.g. the arrow sign in the Sumerian script had the phonetic value *ti* with the meaning 'life' as *ti* stood both for 'arrow' and 'life' in the Sumerian language). Phonograms formed by the rebus principle can be recognized only if the underlying language is known or assumed as a working hypothesis. Since the identity of the Harappan language has not yet been established beyond doubt, it cannot be said that any phonogram has been recognized with certainty. Even the most commonly cited example of the FISH sign *mīṉ='fish'/*mīṉ='star, planet' first proposed by Heras and later adopted by the Soviet and the Finnish Groups and by me is still only a guess based on the Dravidian hypothesis. It is however very likely that there are rebus-based phonograms in the Indus Script as, otherwise, it is very difficult to account for the presence of such unlikely objects as the fish, birds, animals and insects in what are most probably names and titles on the seal-texts. It is likely that the Indus Script resembles in this respect the Egyptian Script in which pictographic signs serve as phonetic signs based on the rebus principle (e.g. the picture of a 'goose' stands for 'son' as the two words were homonymous in the Egyptian language).

It is not always possible in the present state of our knowledge to distinguish between ideograms and phonograms. A good example is the LOAD-BEARER sign which is treated by the Soviet Group as a phonogram with the value *kā: to protect (derived by rebus from *kā: 'yoke'. (N.V.Gurov in *Proto-Indica:* 1968, 1970). I have however interpreted this sign as an ideograph with the meaning 'office-bearer' on the basis of similar usage in later Indian traditions (I.Mahadevan 1975, 1980, 1982; also in this vol.). More recently, Asko parpola (1981) and K.V.Ramesh (in this vol.) have also proposed ideographic interpretations for the BEARER group of signs, though the proposed solutions vary in each case.

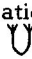
Conventional signs are not picture-signs but arbitrary symbols or marks. The 'stroke' signs in the Indus Script (other than the *numerals* 1 to 9) belong to this category. It is not possible to ascertain their meanings or phonetic values *directly* in the absence of bilingual records. It is however possible to study the functional characteristics of the more frequent stroke-signs and determine their significance in a broad manner. For example, the super-script short stroke signs ' and " appear to be grammatical suffixes (see *infra.*).

5. Modifiers attached to the signs modify the meanings in cases where both the basic and the modified signs have the same pattern of distribution.

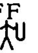
This pattern of occurrence provides strong evidence for the essentially ideographic character of the Indus Script. The most outstanding examples are the FISH group of signs, where all the modified signs have virtually the same distribution pattern (that is, any modified FISH sign can be replaced by any other sign of the group in almost all contexts). Such a pattern is wholly inconsistent with phonetic modifications of syllabic signs.

There are also signs where the modifications result in change in the distributional pattern.
(e.g.)  and 
In such cases however there is no *prima facie* evidence to determine whether the modifications are ideographic or phonetic, or indeed whether the two signs are related at all. So far the existence of phonetic modifiers has not been proved by structural analysis.

6. Ligatures of word-signs modify the meanings in cases where both the basic and the ligatured signs have the same pattern of distribution.

This is again good evidence for the substantial ideographic content of the Indus Script. Such a pattern is also inconsistent with that of combinations of phonetic syllables.
(e.g.)  and  .

There are also ligatures where the ligaturing alters the pattern of occurrence. Such ligatures may be either compound ideograms or compound phonograms or even compounds of ideograms and phonograms or even unrelated signs with different meanings.
(e.g.)  and  .

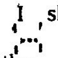
An interesting feature of ligaturing is that it can be shown in many cases that the ligatured compound signs have to be read from right to left. The clearest examples are the anthropomorphic signs where the men hold the objects in the *left* hand.
(e.g.) MAN WITH STAFF  ,
MAN WITH CUP  etc.
Since it is unlikely that the Harappans were all left-handed or that the men in the pictograms turn their backs to the readers, the only reasonable explanation is that such ligatures have to be read from the right (e.g.)  as STAFF MAN or STAFF-ER but not MAN-STAFF or say, SUPERVISOR, a word different from those represented by the component word-signs.

There are signs which sometimes occur ligatured, but at other times are placed side by side, clearly revealing the sequence as well as the integral character of the component words making up the compound word-sign.
(e.g.)  and 

Where signs are ligatured one below the other, the natural sequence appears to be from top to bottom. (I do not now agree with the Soviet and the Finnish suggestion for bottom-to-top reading of JAR-BEARER  and LANCE-BEARER  signs).

In one case in which two signs are ligatured one within the other , the sequence is revealed by the following superscript suffix  which in other cases goes only with the inner sign and not with the outer sign of the ligature.

7A

As I shall show presently the ligature  is a suffix to be read *after* the included sign and not before as supposed by the Soviet Group.

In other cases where none of the above rules apply it is not possible at present to split up the ligatures with certainty, or even to say whether such signs are ligatures or modified signs or integral basic signs which cannot be split up further. One cannot for example, assign without further evidence, the same value (ideographic, phonetic or conventional) to the short single vertical strokes found inside or under many of the signs.
(e.g.)  ,  ,  etc.

III. GRAMMATICAL ANALYSIS OF THE INDUS TEXTS

1. A 'word-sign' in the Indus Texts stands for a morpheme or a word or a compound-word.

As seen earlier, segmentation of the Indus Texts has shown that they consist of a succession of signs which are independent linguistic units. It is thus likely that each sign represents a morpheme. It is also possible that some of the signs may each represent a word comprising more than one morpheme. A sign with an attached modifying element or a ligatured sign may represent a morpheme or a word with more than one morpheme or a compound expression consisting of more than one word.

2. A morphemic sign represents either a root morpheme or a suffix.

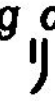
Morphemic signs can be grouped on the basis of their positional and functional characteristics into two classes, viz., root morphemes and suffixes. Root morphemes comprise the bulk of the signary (406 signs), but have a much lower average frequency (25 times) when compared with the suffixes which are fewer in number (10 basic signs, 3 ligatures and one modifying element) but with a much higher average frequency (250 times). A list of suffixes along with their distributional statistics is given in the Chart.

3. A root sign represents either a substantive or an attribute. The same sign can serve either function in different positions.

In the Indus Texts there seems to be only one class of root morphemes which function either as substantives (nouns) or as attributes (adjectives) depending on their position. However it is possible to classify the root morphemes into those which occur more often as substantives and others which occur more often as attributes.
(e.g.)  occurs more often as an attribute while  occurs more often as a substantive.

4. Attributes precede the substantives they qualify.

Textual analysis shows the attributive character of the root morphemes which optionally precede the substantives within a phrase. Numerals which are attributive in function precede the enumerated objects.
(e.g.).  ,  etc.

5. The three super-script short stroke signs are grammatical suffixes functioning as case-markers. (Signs  *and*  *).*

Signs functioning as case-endings

are recognized by the following characteristics (See Chart):

(i) They are suffixes occurring only in final or quasi-final positions in texts or phrases (which are minimal meaningful word sequences within a text).

(ii) They occur more often medially (generally at the end of the 'introductory' phrase) than finally in a text as their function is to relate the preceding substantive to the remainder of the text.

(iii) Their super-script position, their physical placement much closer to the preceding than the succeeding sign and the rare instances where they are ligatured with the preceding sign (e.g. texts 1332, 1424 and 5067) confirm that a suffix of this class and the preceding sign constitute one word.

It can be shown that the employment of a super-script suffix is governed by the preceding substantive. The substantives can be classified into three groups on the basis of the types of super-script suffixes which can be added to them:

(i) Substantives which are followed by any one of the three suffixes.

(ii) Substantives which are followed by either of two suffixes only, or  .

(iii) Substantives which are followed invariably by the suffix  only.

It seems possible to infer broadly the meaning or function of the super-script short stroke suffixes as a class on the basis of the following considerations:

(i) They occur most often after single initial signs at the end of an 'introductory' phrase within the text.

(ii) The 'introductory' phrase is optional and serves as an attribute of the succeeding substantive phrase in the text.

(iii) In ancient Indian inscriptions place-names preceded personal names. This is also likely to be the pattern in the Indus seal-texts most probably containing the owners' names.

(iv) At least three of the initial signs preceding the super-script suffixes in the frequent introductory phrases can be identified as place-names from the context as well as on the basis of closely analogous forms in other contemporary pictographic scripts:

 : PALACE, TEMPLE

 : CITY

 : CROSS-ROADS, QUARTERS

(cf. I.Mahadevan 1981, for details).

If these parallels are accepted as valid, the three superscript suffixes which follow them are likely to be locative case-endings. However it is seen from the texts that these suffixes also follow anthropomorphic signs (most probably representing personal names, titles, professions etc.) in similar contexts. In these

cases the super-script suffixes seem to have genitive, possessive or oblique case significations. Other possible case-endings are found to be unlikely for the following reasons:

(i) Introductory phrases consisting of a place-name and a super-script suffix are often followed by anthropomorphic signs representing personal names and titles. In these cases, dative or ablative cases seem unlikely.

(ii) The occurrence of accusative or instrumental cases on the brief seal-texts containing only place-names and personal names also seems unlikely.

It needs to be emphasised that the super-script short stroke suffixes are conventional signs and hence their phonetic values cannot be determined by ideographic parallels or by the rebus method or by treating them as 'numeral' signs (which they are not). At present I am not also able to find the precise distinction in the meanings of the three suffixes which are functionally very similar but not identical. Tentatively all the three suffixes may be interpreted to mean broadly 'OF, IN, AMONG, BELONGING TO' (or as the oblique case markers). Thus we may provisionally interpret the frequent opening phrases as follows:

 : OF the Palace/ Temple.

 : IN the City.

 : AMONG the archers etc.

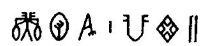
6. The single and double short stroke signs of the middle register function as conjunctions in medial positions (signs I and II).

The single and double short stroke signs of the middle register (signs I and II) seem to be functionally different from similar strokes placed in the upper register (signs I and II). When the single and double strokes in the middle register occur in non-initial positions, they do not appear to function as case-endings, but rather as conjunctions joining two independent linguistic formations (phrases or whole texts). Compare the texts in 4237 and 2039 which are joined together by the sign I in 4017. Similarly 2600 and 2039 are joined together by sign I in 4297. Compare also 1348 and 1373 for a similar use of sign II :

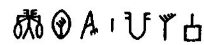
Text No.

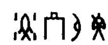
4237: 

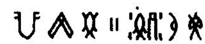
2039: 

4017: 

2600: 

4297: 

1348: 

1373: 

The single and double short strokes of the middle register (signs I and II) occurring in the non-initial (medial or final) positions function differently from the same (?) signs placed in the initial positions where they appear to be numerals (1 and 2) or alternate forms for the single and double long strokes (signs | and ||).

In general, the Indus Script seems to distinguish semantically and functionally between long and short vertical strokes and also between the short vertical strokes of upper and middle registers.

7. A set of five frequent terminal signs (and their ligatures and combinations) function as nominal suffixes:



A significant finding of the present study is that these signs are not grammatical morphs (indicating number, gender, person or case) as proposed by most of the investigators (though none of the models are in agreement), but function as nominal suffixes in name-formation as originally suggested by G.R.Hunter (1934). It can also be shown that these signs are substantives with ideographic signification. The evidence on these points is briefly summarised below:

(i) There are rare but well-attested cases of solus occurrences of the signs. occurs as a single-sign text on a recently found button-seal from Daimabad. and occur as large single signs on pottery. also occurs as a single ideogram in a scene on a sealing (2841) from Mohenjodaro. These solus occurrences indicate the ideographic character of the signs.

(ii) The signs are occasionally doubled, behaving in this respect as some other substantive word-signs in the script. is doubled 14 times, 9 times and once; but the signs do not function as suffixes in these cases.

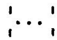
(iii) There are a number of instances where these signs are immediately preceded, not by substantives, but by the super-script stroke suffixes and thus stand initially or by themselves separated from the preceding texts. This pattern is compatible only with the substantive character of the signs (cf. I.Mahadevan 1977: Table II).

(iv) There are even more instances where these signs are immediately followed by the superscript stroke suffixes confirming their substantive character (Ibid).

(v) occurs also modified with 1 to 4 short strokes placed on the top. The modified signs share to some extent the environment of the basic sign (cf. concordances). This pattern is not compatible with the theory which treats this sign as the oblique case suffix. The pattern of distribution of the modified signs indicate an ideographic relationship to one another.

(vi) Two of the signs (and) occur as the upper parts of ligatures in signs , , and . In these cases the Egyptian parallels as well as general probabilities indicate that the ligatured signs have to be read from top to bottom. There are no convincing arguments for reading the ligatures from bottom to top as proposed by the Soviet and the Finnish Groups. As both the Groups regard the lower parts of these ligatured signs as substantives, it follows that and which precede the substantives cannot be case-endings. Recently Asko

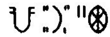
Parpola (1979) has veered round to the view that these signs could be substantives but used with genitive and dative signification. This is of course possible. For another view see my paper *Terminal ideograms in the Indus Script* (I.Mahadevan 1982). Another implication of this analysis is that the nominal suffixes, being elements in name formation, are added only to personal nouns and not to other types of nouns. If this result is found valid on further investigation, it would help us to classify the substantives (nouns) accordingly. Nominal suffixes can be classified as primary or secondary depending on their position after the root morphemes (see Chart).

8. *The ligatured element*  *is the plural marker.*

The Soviet Group (*Proto-Indica* 1979:8) has treated all circumgraphs alike describing the ligaturing "as a norm of orthography and not a norm of the language". According to them the circumgraph should be read first and then the inserted sign, as numerals precede the substantives in the texts. However this analogy does not hold good in this case as textual analysis clearly indicates that the ligatured circumgraph (of four short vertical strokes) functions like a *suffix* and not as an attribute and thus has to be read *after* the included sign and not before. The evidence for this view can be briefly summarised as follows:

(i) The pattern of numeral circumgraphs relied upon by the Soviet Group is illustrated below:

4134: 

1074: 

We notice in this case that the basic sign preceded by the numeral 5 in 4134 and the ligatured sign circumscribed by the numeral 7 in 1074 share the same environment. This is thus a case of mere alternative modes of writing. Hence this circumgraph is an attribute to be read *before* the included sign like a preceding numeral.

(ii) The pattern is however wholly different in the case of the 4-stroke circumgraph found attached to 20 signs (cf. sign-list in I.Mahadevan 1977). Here the ligaturing alters the basic character of the included sign in two major respects:

(a) A basic sign which is mostly *initial* or medial becomes mostly *final* when ligatured with the 4-stroke circumgraph:
(e.g.)

Sign	Ini.	Med.	Fin.
	36	309	18
	2	5	21
	77	137	1?
	3	5	10
	68	209	0
	0	2	7
	30	72	0
	0	4	4

(b) A basic sign which is normally followed by a primary nominal suffix[, , -group] loses it when ligatured with the 4-stroke circumgraph:

(e.g.)

Text No.

3103 :

1177 :

1625 :

1316 :

4285 :

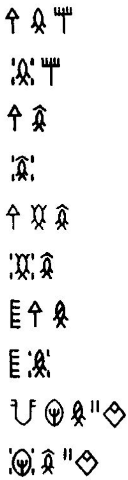
3070 :

4659 :

4465 :

9001 :

4117 :



The only major exception to this pattern is the sign '' which is always followed by the suffix . It is noteworthy that this is also the only sign which has no corresponding 'basic' sign without the circumgraph. The sign is followed once by the suffix . The sign is followed thrice by the suffix . The exceptions require further study.

(iii) There is however overwhelming evidence of the two special features of the 4-stroke circumgraph, not shared by any other circumgraph. I would interpret the evidence as follows:

(a) A basic sign becomes substantivised by the addition of the 4-stroke circumgraph and then ceases to function as an attribute.

(b) The 4-stroke circumgraph is a suffix which in the ligatured signs generally replaces the nominal suffix of the corresponding basic sign. In other words, the circumgraphed sign functionally corresponds to the sign-pair formed by the basic sign and its nominal suffix.

(c) This analysis also shows that the 4-stroke suffix is functionally analogous to the nominal suffixes and not to the case-marker stroke-suffixes.

(d) In Egyptian hieroglyphic script the addition of a very similar sign (consisting in this case of 3 short strokes placed side by side or one below the other) is a sign of the plural. Taking all these factors into account I suggest on this analogy that the 4-stroke suffix is the plural marker in the Indus Script as originally proposed by Heras (1953:83).

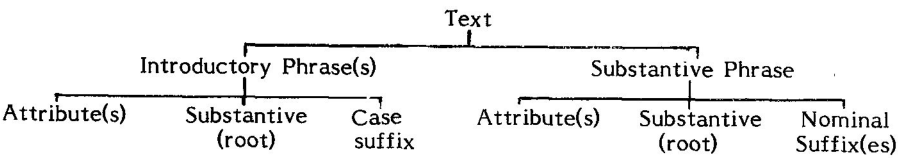
(e) A further implication of this result is that the nominal suffixes are added to singular nouns. This result is in conformity with our earlier finding that the nominal suffixes are added to personal nouns (probably to names and titles).

9. An Indus Text generally consists of a substantive phrase preceded (optionally) by an introductory phrase.

The core of a text is the root morpheme or substantive. It may be preceded (optionally) by one or more root morphemes functioning as attribute(s) qualifying the substantive. The substantive may be followed by one to three nominal suffix(es). The whole sequence namely, the attribute(s) (if any), the substantive and the nominal suffix(es) (if any), constitutes the substantive phrase of the text. A 'phrase' is a minimal linguistically meaningful word-sequence within a text.

The substantive phrase may be preceded optionally by one (or rarely more) 'introductory' phrase(s) which serve(s) as the attribute(s) qualifying the substantive phrase. The introductory phrase has at its core a root morpheme as the substantive, preceded (rarely) by one (or more) root morpheme(s) acting as attribute(s) qualifying the substantive. The substantive is followed by a case marker in the introductory phrase(s).

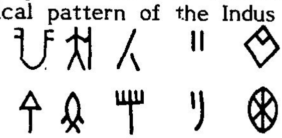
The following diagram illustrates the syntax of an Indus Text:



A provisional analysis of two specimen texts is given below to illustrate the syntactical pattern of the Indus Texts:

1078:

1543:



E D C B A

AB: Attributive (introductory) phrase.

A: Substantive root morpheme (of the attributive phrase).

B: Case-marker suffix (attached to the substantive A).

CDE: Substantive (main phrase of the text).

C: Attribute to the substantive D.

D: Substantive root morpheme (of the main phrase).

E: Nominal suffix (attached to the substantive D).

NOTE

Sign and Text numbers and the statistical data in this paper are taken from *The Indus Script: Texts, Concordance and Tables*, I.Mahadevan (1977).

CHART
POSITIONAL-STATISTICAL ANALYSIS OF SUFFIXES IN THE INDUS SCRIPT

SIGN	SIGN NO.	SOL.	INI.	MED.	FIN.	TOT.	Remarks
Class A: Super-Script Suffixes/Case-Markers:							
	97	0	*1	87	3	91	*In a second line (doubtfully).
	99	0	*2	625	22	649	*Prob. standing for s.100 or s.87?
	123	0	0	186	7	193	
Class B: Conjunctions:							
	98	0	*4	72	12	88	*Only once intial; Prob. var. of.s.86. 3 times in a second line.
	100	*1	@12	16	0	29	*On a potsherd (as a numeral). @These are numerals (un-connected in function with s.100) or var. of s.87.
Class C: Primary Nominal Suffixes:							
	342	*3	@1	420	971	1395	*in second sides/lines. @in a second line.
	211	*1	0	42	184	227	*in a second line.
	12	*1	@1	9	69	80	*On a potsherd. @in a second line.
	13	0	0	0	1	1	
	14	0	0	2	11	13	
	15	*3	@1	30	92	126	*Once each on potsherd and a frag. seal and in a 'scene' on a sealing. @in a second line.
Class D: Secondary Nominal Suffixes:							
	1	*3	@12	33	86	134	*Once doubtfully. Twice in second lines. @ Only when doubled.
	176	*1	0	38	316	355	*Doubtful
Class E: Plural Marker:							
	*	7	22	29	62	120	*Occurs only as ligature (with 120 signs.) The distr. is of the lig. signs.

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THE CONCEPT OF SYLLABLE IN TOLKAPPIYAM

S.V.Shanmugam

Introduction

Tolkāppiyam has recognized only two basic elements in a language and they are called *eluttu* and *col*. This is revealed by the titles of the two chapters, viz., *elutt-ati-kāram*, chapter on phonology; and *col-l-atikāram*, chapter on morphology and syntax. However, the terms *eluttu* and *col* are not only used in different senses but also they have synonyms.

Eluttu is employed to denote the three senses, viz., 1) phoneme, 2) grapheme and 3) suffix. Among these, the first meaning is the most common and frequent and the other two are less common and less frequent. *kilavi* is the other term used synonymously to express the phoneme (E.62.1,81.1.etc.)

Col is used in the sense of morpheme, root and word. *kilavi* and *moli* are the synonymous terms. Among these terms, *kilavi* is the most frequent in the whole of Tolkāppiyam to denote the word and *moli* has the highest frequency only in the first chapter *elutt-atikāram* in the sense of word.

All these things make it clear that Tolkāppiyam has not recognized any other intermediate structure like syllable. However, Tolkāppiyam has described the sequence structure of phonology also the relationship between the phoneme and the word i.e., *eluttu* and *moli*. They reveal some sort of the concept of syllable. Moreover, the section on prosody in the third chapter also has some notion of syllable. Therefore the concept of syllable in Tolkāppiyam is discussed under three major headings viz., i) the sequence structure, ii) the relationship between *eluttu* and *moli* and iii) the elements of poetry and the implications with regard to syllable are pointed out under each headings.

1. Sequence Structure

First it should be noted that Tolkāppiyam has discussed in the first two sections viz. *nūnmarapu* and *molimarapu* of the first chapter, the phonological structure of Tamil. The first section, *nūnmarapu* deals with the inventory of Tamil phonemes and the various classifications and also the sequence of two consonants. However, this section is considered to describe the individual phonemes. So, it is problematic how the two consonant sequences could be considered as part of the phonemic inventory. This will be discussed in the later part of this section. The second section, *molimarapu* discusses the

phonological word by describing the sequence structure within a word.

Tolkāppiyam describes the initial and final phonemes in the second section of the first chapter and some sort of sequence restriction has been pointed out there also.

a. Initial Structure

S. 58 says all the twelve vowels can occur initially. The next sutra states that the consonant cannot occur initially if it is not followed by vowel. Therefore, the initial consonants with the following vowels are pointed out in the following sutras. This means the initial sequence can be either V- or CV- and not *CC-.

b. Structure of Finals

S.69 states that all vowels except *au* can occur finally. But the commentators say that this statement is common to vowels and syllabic letters (uyir-mey) and the short vowels occur finally only in *aḷapeṭai* 'extra-long vowel'. The next sutras (70 to 76) refer to the restrictions of consonant-vowel combinations in the final position and the sutras 78 to 81 deal with the consonantal ending. Therefore the final sequence in Tamil is either -V, -CV or -C.

c. Consonant Clusters

Tolkāppiyam has noted the occurrence of two consonant clusters and three consonant clusters, the former under the first section and the latter under the second section.

As already pointed out, the discussion of two consonant sequences in the first section is problematic. Naccinārkkiṉiyar (14th cent.), the commentator, states that the sutras discussing two consonant sequences are to be treated as the means (*karuvi*) to the second section where the phonological structure of the word is discussed. Sivagnana munivar (18th cent.) justifies the inclusion of the sutras because, for him, consonant sequence is the characteristic feature of the each one of the consonants with reference to one or more consonants. According to him, the consonant sequence can be looked upon as a friendship or attraction while non-coming of two consonants as enemity or resistance.

Murugaiyan (1972) has explained the two consonant sequences in terms of syllable division and the concept of abutting enunciated by Abercrombie. Two consonant sequences whether they are geminated or non-geminated are hetro-syllabic, i.e. the first consonant of the sequences becoming part of the previous syllable and the second consonant becoming part of the following syllable.

V_1 C_1 C_2 V_2 is syllabically

$V_1 C_1 - C_2 V_2$

Therefore, from the syllabic point of view, there is no cluster here and so the description of the two consonant clusters in the section where the individual phonemes are described is justified.

The three consonant sequences are discussed under the second section. Tolkāppiyam has rightly pointed out that the first consonant can be either one of *y*, *r* or *l* and the second consonant would be stop [P] or nasal [N]. The structure of three consonant sequences will be as follows:

$$\left\{\begin{matrix} Y \\ r \\ l \end{matrix}\right\} \left\{\begin{matrix} P \\ N \end{matrix}\right\} P \text{ or simply } C_1\, C_2\, C_3$$

The three consonant sequence is called by the term *īrorru* (S.48) 'two consonants' and it reveals the concept of the syllabic division. That is, the first two consonants form the coda of the previous syllable and the third consonant, the onset of the following syllable:

$VC_1\ C_2\ C_3$ is syllabically $VC_1\ C_2 - C_3\ V$.

It is to be pointed out here that Tolkāppiyam has referred to the occurrence of one of the two consonant sequences in the word final position as *īrorru* (S.51) which is as the same as the term for three consonant sequences. The word under discussion is *pōnm* 'similar-it' found in poetry and derived from the word *pōlum*. Here the two consonant sequence forms part of a single syllable and so the term *īrorru* is appropriately used in Tolkāppiyam (S.51).

The description of sequence restriction might have been influenced by the writing system in Tamil, where, like other Indian languages, there are pure vowels, consonants and syllabic letters which are the combination of a consonant and a vowel. However, the discussion of the consonant sequences in two different sections and the term used for the three consonant sequences in general and in particular two consonant sequence which functions as a coda reveals the awareness of the concept of the syllable and the correct description of Tamil syllabic structure.

2. Relationship Between *Eluttu* and *Moli*

The relationship between *eluttu* and *moli* are described in two ways, viz., i) how *eluttu* constitutes a word and ii) how a word is classified on the basis of *eluttu*.

a. *Eluttu* to *Moli*

There are two sutras (S.43 and 44) about how *eluttu* constitutes a word. In both the sutras, the terms used are *netteluttu* 'long letter' and *Kurreluttu* '~~short~~ letter' and they are same as that of the terms used for the classification of vowels (S. 3, 4). That means, the vowels alone are considered to constitute a monomorphemic word.

S. 43 says that the seven long vowels constitute a word of one *eluttu*. Exx. *ā* 'cow', *ī* 'fly' etc. Since the long vowel *au* does not occur as a word in Tamil, the commentators have explained that the long vowels here includes the syllabic letters also. That is, the words like *tā* 'give' *pō* 'go'. *kau* 'catch by teeth' are to be considered as words of one *eluttu*. If so, the *eluttu* here means the syllable and *ōreluttu orumoli* 'a word of one *eluttu*' means monosyllabic monomorphemic word. This is from the positive point of view.

The next sutra describes negatively by saying that the five short vowels do not constitute a word. However, the commentators have pointed out that there are two short monosyllabic monomorphemic words in Tamil, viz. *tu* 'eat' and *no* 'suffer'. But the analysis of all the related forms of these two words reveals that the base forms are really *tuy* and *nō* respectively (for details, see, Shanmugam 1980: 167-8) and

so they cannot be considered short monosyllabic words.

It is clear from the above discussion that Tolkāppiyam here refers to the monomorphemic words of mono-open syllable only (V and CV) and not mono-closed syllables which can be VC, CVC, VC and CVC.

b. *Moḻi* to *Eḻuttu*

S. 45 discusses the classification of words, viz. i) words of one *eḻuttu*, ii) words of two *eḻuttus* and iii) words of more than two *eḻuttus* or words of poly *eḻuttus*. Here *eḻuttu* is taken to mean two different senses by the commentators. Iḷampūraṇar, the first commentator (10th cent.), gives the following examples:

ā 'cow'	- word of one *eḻuttu*
maṇi 'bell'	- word of two *eḻuttus*
varaku 'millet'	
koṟṟaṉ 'name of a person'	- Words of more than two *eḻuttus*

Therefore, *eḻuttu* here can be considered to mean the graphemes which include pure vowels, pure consonants and syllabic letters. But Naccinārkkiniyar has specifically mentioned in his commentary that the consonants and the shorter *u* should not be considered as *eḻuttu* here because they are not counted as *eḻuttu* in the prosody even according to Tolkāppiya sutras in the section of prosody in the third chapter, ***poruḷatikāram*** and also because the consonants and the shorter *u* are prohibited to constitute a word according to the previous two sutras. The examples given by Naccinārkkiniyar are as follows:

ā 'cow' *kā* 'groove' *nā* 'tongue'	- Words of one *eḻuttu*
maṇi 'bell' *varaku* 'millet' *koṟṟaṉ* 'name of a person'	- Words of two *eḻuttus*
kuruvu 'a tree' *aravu* 'snake'	- Words of three *eḻuttus*
kanaviri 'a flower'	- Word of four *eḻuttus*
akattiyaṉār 'name of a person	- Word of five *eḻuttus*
tiruccirrampalam 'name of a town'	- Word of six *eḻuttus*
perumparrappuliyūr name of a town'	- Word of seven *eḻuttus*

The above illustrations also confirm his view that *eḻuttu* is taken to mean the syllable.

The later day scholars do not accept this interpretation of Naccinārkkiniyar because of certain inconsistencies in his commentary (for detail, see Shanmugam 1980:170) and contradiction to the usage of Tolkāppiyam elsewhere. Tolkāppiyam in S. 407 mentions the classification of words occurring with shorter *u* on the basis of *eḻuttu*. Here, the words are classified into two viz. i) words of two *eḻuttus* and ii) words of poly *eḻuttus* and they are further classified on the basis of *eḻuttu* preceding the final syllable - For example,

nāṭu 'country'	- Word of two *eḻuttus*

varakụ 'millet'
pākkụ 'arecanut'
vāṅkụ 'bend'
teḷkụ 'flea'
e:kụ 'steel'

- Words of poly-*eluttus*

Here *varakụ* 'millet' is a trisyllabic word for us but it is disyllabic word for Naccinārkkiniyar. All other words are disyllabic for us and monosyllabic words for Naccinārkkiniyar. The difference is due to the treatment of shorter *ụ* which is not considered as a syllable by Naccinārkkiniyar but is taken to constitute a syllable by us. Tolkāppiyam in the above sutra has taken nāṭụ as *īreluttu orumoli* 'word of two eluttus' and all others as words of poly*eluttus*.

So, it is clear that *eluttu* cannot be taken as a syllable as Naccinārkkiniyar does. However, Naccinārkkiniyar may be credited to advocate explicitly for the first time the concept of syllable in the Tamil grammatical tradition. However, his examples are not appropriate.

3. Elements of Poetry

Tolkappiyam, in the third chapter, discusses the elements of poetry in the section on prosody. Among them *māttirai* 'matra', *eluttu*, *acai*, and *cīr* are relevant for our discussion. Matras and *eluttus* are said to be same as explained above, i.e. in the first chapter. *Acais* are of two kinds with the following patterns:

(C) V (C)
(C) V̄ (C) - *nēr-acai*

(C)V CV(C)
(C)V CV̄(C) - *nirai-y-acai*

Here *nēracai* is nothing but the monosyllable and *niraiyacai* the disyllable. Here Tolkāppiyam has specifically mentioned that in the counting of *eluttu* in *acai*, non-vowels should be omitted (*Ceyyuḷiyal.* S.351). *cīr* can be interpreted as the poetic word, because the words of the ordinary language could be split due to the poetic exigency. However, the recognition of *acai* in between *eluttu* and *cīr* reveals the awareness of the concept of syllable but it cannot be equated with the concept of syllable in the linguistic sense because *acai* in poetry includes monosyllables and disyllables as noted above.

4. Conclusion

As pointed out in the introduction, Tolkāppiyam does not explain the concept of syllable explicitly. However, the three evidences discussed above imply some awareness of the concept of syllable. But Naccinārkkiniyar, a commentator of 14th century, was aware of the concept of syllable and he was of the opinion that a word is built out of syllables which are in turn built of phonemes. This means the syllable is a concatenative phonetic unit for Naccinārkkiniyar.

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A HISTORICAL STUDY OF AUXILIARY VERBS IN OLD TAMIL

M. Suseela

Auxiliary verbs are those verbs which added with the main verbs express some more additional meanings. In old Tamil, we find the beginning stage of this auxiliary verb system. However, we are able to find in the OT texts the modal auxiliaries *Ventum* 'want', *venta* 'do'nt want' *kutum* 'possible' *kutatu* 'should not' *akum* 'may' the explicative auxiliaries *cel* 'go', *i* 'give', *ari* 'know', '*kan*' 'see' *kattu* 'show', *itu* 'put' kotu 'give' arul 'give', vitu 'leave', *oli* 'go', the reflexive auxiliary verb *kol* 'have' the passive auxiliary verb *patu* 'experience', the causal auxiliaries *cey* 'do', *pannu* 'make', *vai* 'put', *akku* 'make', and the tense auxiliary verb *iru* 'be' though in very low frequency.

1. Modal Auxiliaries

These auxiliaries indicate necessity, probability etc. of the incidence indicated by the main verb. The main feature of these auxiliary verbs is that these verbs do not have gender, number and tense markers. And also these verbs do not have the imperative form.

1.1. ventum

This verb indicates the necessity of the incidence noted by the main verb. Though Tolkappiyam, the earliest extant Tamil grammar, does not mention anything about auxiliary verbs it mentions about this word *ventum* as follows : -

itu ceyal ventum ennun kilavi
iruvayi nilaiyam porutta kumme
tanpa tanum piran palanum

(Tol. Col. cut. 243)

In OT in most of the instances this is found after verbal nouns.

tunkutal purintanar namarena
ankavarkku

ariyak kural ventum toli
Akam 382.7-8

"Some one should inform him that our people are sleeping"

tirumaru marpani yrulal
ventum PAR 1. 36

"O Lord, loved by Lakshmi, you should grace"

evvuyirk kayinu mirankal
ventum MM 23 - 79

"We should pity whatever soul
may be"

Only in four instances this is found after the infinitive (PR1, KL1, MM2)

Valara Ventum avale yenrum
PR 339.11

"Always she should grow"

Ketta levan ceyya ventumo
marrika

avankanni yanro atu
KL 107. 13-14

"If one asks what to do? Is it not his garland?"

1.2. Venta

This states that the incidence indicated by the main verb is not necessary. This too in most of the instances occurs after the verbal nouns.

nantutu molintanam vitalventa
.... KL 28.22

"It is not necessary to send
message"

This is also for the first time found in PR after infinitive. In OT this is found in six instances after infinitive. (PR3, TK2, MM1)

varunta venta valkavan ralc
PR101.10

"Do'nt worry, may long
live be!"

Kalaver valkkaiya ruruun
katuntuyar

ilaveyt tolayk kituvena venta
MM 23. 126-127

"It is not necessary to say to you, young lady, the suffering which they who use the plough of stealing attain".

1.3. kutum

This verb indicates the possibility of the occurrence of the incidence stated by the main verb. Out of 13 instances, in 12 instances this occurs after verbal nouns.

.... avarvarin

yanuyir valtal kutu mannay
AIN 213. 4-5

"If he comes I can live"

ariya tatiyan kitutalun kutum
CIL 10.89

"You may put foot here without knowing"

For the first time in Cilappatikaram this occurs after infinitive in one instances.

kutankaiyi nontu kollavun kutum
CIL 10.83

"One can take with palms"

1.4. kutatu

Though this is opposite verb to *kutum* this does not negate the possibility of the occurrences of an incidence, instead it prohibits an action.

In OT this is found in only two instances after the verbal noun.

naccal kutatu peruma . . . . .
KL 8.19
"One should not desire, Lord"

1.5. akum

This verb indicates the possibility. This is found only in two instances after the verbal noun (KLI, TKI)

Valamiyo vaikalun ceyalakum --
KL 15.24
"We may earn whenever we want"

This is the earlier structure of the modern Tamil form *patikalam* 'one may read' *ceyyalam* 'one may do' etc.

2. Explicative auxiliaries

These verbs add some more additional expressions to the meanings by the main verbs.

2.1. cel

As equal to the modern Tamil auxiliary verb *po* (as in *utaintu po* break down') the verb *cel* is found in one instance in OT.

ninru nilaiyiyar nin nanmi
nillatu

pataac celiiyarnin pakaivar
mine PR 24, 24-25

"May everlast your 'birthstar'!
May
die away your enemies 'birth
star'!

It can be mentioned here that to the verb *pataac celiiyar* the commentators write the commentary as *pattup-povtaka*. However, the frequency of this verb does not increase afterwards. It disappears from the language.

2.2. i

This verb is equal to the modern Tamil Literary verb *arul* 'grace'. In late Old Tamil and Middle Tamil the verb *arul* increases in the frequency and the verb *i* disappears from the language. The main difference between these two verbs are while the former comes only in positive sentences the latter comes both in positive and negative sentences.

ancuvarak katunkural payirra
time NR 83-9

"Do'nt shout as to fear"

arancey timo varulvey yoyena
PR 145.7

"You, who desire grace, do
justice"

The decrease in the frequency of this verb in course of time can be seen in the following chart.

PT	AIN	AK	NR	KR	PR
1	10	8	8	2	3
PP	PAR	KL	TK	CIL	MM
1	-	28	-	2	-

2.3. ari

As equal to the modern Tamil auxiliary verb *par* as in *ninattuppar* 'think out' in OT we find the verb *ari* 'know' in two instances in AK.

ulliyu maritiro emmena .....
AK 39.2
"Have you remembered us ...."

2.4. kan

This is also equal to the above verb. This is found in three instances in KL.

ivalaic collatik kanpen takaittu
KL 56. 13
"I will talk with her and see"

2.5. kattu

This is found in only one instance in Cilappatikaram.

Katciyur kari katiya kuralicaittuk kattum polum.

CIL 12-13-4

"In the woods a black bird in a harsh voice gave warning of disaster"

2.6. itu

This is in usage in modern period also in literary Tamil. In OT at first this is found in low frequency and slowly increases later on.

PT	AIN	AK	NR	KR	CIL
--	--	2	2	--	5
PR	PP	PAR	KL	TK	MM
6	1	-	8	3	17

anivarai marunkin aituvalaram titta
maniyer totta maiya renal
NR. 344.1 -2

"The cols grown thick and b like the trunk of a pachyderm in scenic slopes"

nimittam vayttitina llatu . . .
CIL 16.1 78
"Only when the time comes"

Konilai tirintitir konilai tiriyum
MM 7.83
"Should royal sceptres be planets go away"

2.8. Kotu

In Modern Tamil this is considered as affective auxiliary verb. This is found only in three instances in OT (KRI, CIL 2)

tanantanai yayinem illuyttuk
kotumo KR 350

"If you leave me drop us off at our house"
talaivanai vanor tamararan kutip palantotu pattinikkuk kattik kotutta
nilaiyonru patutum yam

CIL 24.21.6-8

"We shall sing the incident that the divine beings showed the husband to his wife who is worshipped by all"

.9. arul

At first having appeared only in ne or two instances this verb is ound to increase slowly.

PT	AIN	AK	NR	KR	CIL
-	-	1	1	-	9

PR	PP	PAR	KL	TK	MM
1	--	--	2	-	4

ninra vennayan tarudi . . . .

PR 208.3

"Having graced me who was standing there"

Virikunir nala malvoy kettarul

MM 5.31

"O born to rule this land, hear!"

9. Vitu

This is also found only in low :quency at first and later on its fre- ency increases.

PT	AIN	AK	NR	KR	CIL
		1	1	1	-

PR	PP	PAR	KL	TK	MM
			9	19	-

perumpeyal vitiyal virittuvit tanna
naruntan niyale namma meni

KR. 168. 3-4

"Her beautiful, dark body smells as sweet and feels as cool as buds spread out at dawn in a great rain"

ennotu nirra lelitanro marravan
tannotu ninru vitu

KL 63.16-17

"Is it not easy to stand with me? Stand with him"

2.9. Oli

This is found in only one instance in MM.

......avanmun ayamtoli vayalai

MM 21. 112

"You will not go away from him"

3. Reflexive auxiliary verb *kol*

In Tamil this auxiliary verb is used not only in reflexive sentences but also in the sentences in which the subject is also affected by the action.

avan tannaik katintukontan (Reflexive)

"He condemned himself"
avan tanakku oru puttakam
vankik kontan (Self-affective)
"He bought a book for him"

It can be mentioned here that the auxiliary verb in the second sentence is opposite to the auxiliary verb *kotu*. This can be illustrated by the following examples.

avan tanakku oru pencil
civikkontan (self-affective)
"He sharpened a pencil for
himself"
avan avalukku oru pencil
civikkotuttan
"He sharpened a pencil for her"

In OT, reflexive auxiliary verb *kol* is not found in reflexive sentences. Only the reflexive pronoun *tan* is found. This is also found only in fourteen instances (AIN 68.4, PR 206.7, 274.4, TK 56, 209, 237, 250, 305, 439, 474, 878, 883, 974, 1009).

tarkattut tarkontar penit takai
canra
corkattuc corvital pen
TK 56

"Having protected herself, having favoured her husband and protecting the proud of the family a lady will not have tiredness"

The second type of auxiliary verbs i.e. self-affective are found in many instances in OT. We find these auxiliaries occurring after verbal participles as well as non-finite verbs (murreccams). It should be remembered here that *murreccms* function as verbal participles do in every aspect.

aytoti matavarai ventuti yayir
. . . .
tankatar cerppa varaintanai
konmo AIN 196. 2-6

"O chieftain of the littoral region where the red prawns are caught in the clear backwater if you really want this lady of precious armlet take her"

. . . . . . innoy nonrukolar karite
KR 58.6

"This sickness is very hard to
contain"

In OT a very slow increase in the frequency of this verb is found.

PT	AIN	AK	NR	KR	CIL
-	2	2	1	2	6

PR	PP	PAR	KL	TK	MM
1	2	2	9	4	2

4. Passive Auxiliary Verb Patu

This auxiliary verb changes the active sentences into passive sentences. In OT, three types of passive sentences are found.

1. Sub. NP + Inst. NP + Int + *Patu*

2. Sub. NP + Sub. NP + Int + *Patu*

3. Underlying Inst. NP + Sub.NP + Int + *patu*

Sub. NP + Inst.NP + Int + *patu*

. . . . an nalam
payalaiya lunappattup pantainc
rolintak kal. KL 15.12-13

"If that fairness was destroyed by the sick of grieving"

Sub.NP + Sub.NP + Int. + *patu*

cirantana polun killai pirankiya
pukkamai kuntar koticci
nokkavum patumava toppavum
patume AIN 290 - 2- 4

"The parrots seem to be very lucky. They are both regarded and scared away by the lady of shiny, flower-smelling hair".

3. Ssub. NP + Int + *patu*

ullatu citaippor ularenp patar
KR 283.1

"Those who only use up what there is are said to have nothing at all"

The frequency of these passive sentences in OT is as follows:-

	with Inst.NP.	without Inst. NP	Inst. NP in underlying level
PT	-	-	-
AIN	-	3	1
AK	-	-	2
NR	-	1	2
KR	-	-	5
PR	1	3	4
PP	-	-	1
PAR	-	-	-
KL	2	4	11
TK	4	2	48
CIL	-	-	—
MM	3	1	53

Many structures which have verbal noun in OT are found to have infinitives in later Tamil.

ceytal kantu ----- ceyyak kantu,
ceytal totanikinar ---- coyyat totankinar
ceytal ventum ------- ceyya ventum

are some instances for this. The passive sentences can aslo be treated to have verbal nouns in the underlying level. For instance, the above Ainkurunuru passive sentences --

killai nani cirantana
koticci nokkavenum patum, aval
oppavum patum

can be interpreted as

killai nani cirantana koticci
nokkutalum patum, aval
opputalum patum.

In such an interpretation also the effect of the action goes to *killai*. This interpretation is further strengthened by the OT instances in which the subject NP is found instead of instrumental NP.

These structures can be treated as medieval structures.

1. Killai koticci nokkutalum, aval opputalum patum.

2. killai koticci nokkavum patum, aval oppavum patum (old Tamil).

3. Killai koticciyal nokkavum patum, avalal oppavum patum (Modern Tamil).

Similarly,

1. ak karai antanar nuvalutalum patume

2. ak karai antanar nuvalavum patume (Old Tamil), PR.1)

3. ak karai antanara nuvalavum patume (Modern Tamil)

Unfortunately we are not able to find any instance in OT with the structure *VN + patu*

5. Casual Auxiliaries

Though in OT morphological causatives are found in large number (*arivuruum* "which causes to know" AK 351) the syntactic causatives are also found in few instances. The four auxiliaries *cey, vai, pannu* and *akku* are found in OT.

5.1. cey

This is found in Narrinai, kalittokai and Cilappatikaram each having one instance.

Katalpari netunter varavantu
alunkac
ceytatan tappal anviyum
NR 203.10-11
"Besides making to stop the
chieftain's
chariot visiting"
iruluru kuntala lennai
arulurac ceyinnumak karanuma
ratuve KL 140. 33-34

"If you will make to grace to
me
that will be your virtue"
mankulirac ceyyu maravel
netuntakai
tankutai vemmai vilaitta
tituvenkol CIL 19. 21-22
"The King's umbrella which will
cool down
the earth caused terrible agony.
What
shall we say of this?"

5.2. pannu

This auxiliary verb is found in

Akananuru (3) Purananuru (1) and Kalittokai (1)

annik kurukkaip parantalait
  titiyan

tonnilai mulumutal tumiyap
  pannip

punnai kuraitta nanrai . . . .
AK 45.9-11

"At the time when (he) cut the Punnai tree having destroyed totally the earlier stage of Anni kurukkai Parantalai Titiyan"

utalarum tupp nonrumoli ventarai
anankarum parantalai yunankap
  pannip

piniyuru muracan konta kalai
PR 25.5-7

"At the time when (he) won the drum having defeated the kings who are hard to fight and who came together"

5.3. akku

This auxiliary verb has come in only one instance in Manimekalai.

". . . . . verruru veytavum

antaran tiriyavum akkumiv

varuntiran MM 10.80-81

"This rare skill will make one to get some other structure and to wander in space"

5.4. vai

This has also come in only one instance in Manimekalai,

valankelu kula vanikan cattan
mavan tamilttiram manime
  kalaituravu
araim pattinul ariyavait tananen
MM PT 95-97

"Koolavanikan sathan composed in thirty cantos the Renunciation of Manimekalai and this brought glory to the Tamil World".

Tense auxiliary

Only one tense auxiliary iru is found in puram in one instance.

Peruntakai mannarkku varaij-tirunta nane PR 340.9

"The chieftain had decided to give her in marriage to kings".

As already stated, the OT texts show only a beginning stage of the auxiliary verb system. A full-fledged development is found only in later periods.

Abbreviations

AIN	=	Ainkurunuru	NF	=	Infinitive
AK	=	Akananuru	KL	=	Kalittokai
CIL	=	Cilappatikaram	KR	=	Kuruntokai

MM	=	Manimekalai
NR	=	Narrinai
PAR	=	Paripatal
PP	=	Pattuppattu
PR	=	Purananuru
PT	=	Patirruppattu
TK	=	Tirukkural
TOL	=	Tolkappiyam

DRAVIDIAN WORDS IN DĒSIṆĀMAMĀLĀ

A.Karthikeyan

Prakrit (here after Pkt) and Dravidian (Dr) languages show certain similarities in their linguistic structures and literary traditions. Scholars generally believe that these similarities are due to the contact of Pkt with the Dr.Ananthanarayana (1970), while considering Sanskrit (Skt) and Pkt languages as stylistic variants of the same Indo-Aryan speech, proposes that the similarities between Pkt and Dr languages are due to the influence of the latter on the former. He has listed the following structural similarities which are all due to the influence of Dr on Pkt languages.

1. The use of more retroflex consonants in Pkt languages compared to Skt.

2. The complete loss of heterorganic clusters, whereas in Skt heterorganic clusters are in abundance.

3. The non-occurrence of stop consonants in word final position.

4. Voicing of inter-vocalic single voiceless consonants.

5. Merger of palatal and retroflex sibilants into dental sibilant, etc.

6. In the grammar also certain features of convergence have been noted; viz., the loss of dual number; use of nominal constructions and gerunds; use of *iti*; as a marker following a direct quotation and use of onomatopoeic words. All these features are again characteristics of Dr languages and it is the Pkt which have moved towards Dr.system in all these developments.

Hart, George Luzerne (1976) has further investigated certain shared themes between the literary traditions of Sangam Tamil and Pkt (Maharashtri variety) language. He has attempted to trace out these common features to a common origin from which both these languages have preserved those features. Examples of shared conventions, according to him, are the messenger poem, the motif of separation of lovers during the monsoon, the comparison of the sound of the wind blowing in a hole in bamboo to the noise of a flute, the theme of abhisārikā i.e., the woman who goes to meet her lover at night, etc. He says that though some of these shared themes also occur in classical Skt literature, the full spectrum of them appears in Halas *Sattasaī*, an anthology in Mahārāstri Pkt. This anthology is

said to be contemporaneous with the Tamil poems. To quote Hart, "Indeed virtually every poem of Halas work uses one or more of the Tamil conventions". Classical Skt writers like Kalidasa seemed to have adopted some of these conventions into their Kāvyas in the later stage.

Classification of Pkt Words

Pkt Grammarians usually divide Pkt words into three distinct classes. Viz., *Tatsama*, *Tadbhava and Dēsi* words. Skt words which could be imported into Pkt without any modifications came to be known as *Tatsama* or *Samaskritasama*. Examples:

Skt	*Pkt*	
Kamala	kamala	'lotus'
Sāra	sāra	'essence'
Parama	parama	'highest'
Sama	sama	'equal'

Pkt Grammars do not contain any description about these *Tatsama* words. Skt knowledge was believed to be important before the study of Pkt language. So Tatsama words were beyond the scope of Pkt Grammars.

The second class of words, *Tadbhava* 'arising from Sanskrit' are those which are usually derived from Skt by applying certain phonological rules. Example:

Skt	*Pkt*	
lōka	lōya	'people'
Rshi	isi	'sage'
sarpa	sappa	'serpent'
mūrkha	mukkha	'fool'
yama	jama	'God of death'

Tadbhava words are cognates of Skt words with certain changes. These *Tadbhava* words are the main concern for the Pkt Grammarians. In the grammar, rules are given describing the changes that had taken place to the *tadbhava* words. Pkt grammars contain many special rules for individual words.

Those words which do not have any place in Skt are called as *dēsi* or *dēsya* words. Scholars differ in their opinion with regard to the concept and origin of *Desi* words. However, it is generally accepted that Desi words are *not found in* Skt language. Examples:

Pkt		
Pulli	*Ta.* puli *ka.* huli *Te.* puli	'tiger'
bolla	*ka.* bogalu *Ta.* vaguli	'speak'

Dēsi words, though they comprise almost one third of the Pkt vocabulary they are not included in the Pkt grammars. Learners have to depend upon Pkt literature to learn these *Dēsi* words. For the first time in the history of Pkt language Hemachandra collected all these possible *Dēsi* words and composed the work known as *Dēsināmamālā*. *Pāialacci*, another dictionary, composed by Dhanapāla is said to be full of errors and hence ignored.

Hemachandra belongs to 11th century A.D. and he was born in Gujarat in a village near Ahmedabad. He has also written a grammar for Skt language namely *Siddhahēmasabdānusāsana* whose eighth chapter deals with Pkt grammar. The words in *Dēsināmamālā* are arranged into eight *vargas* — according to the initial letters. The work is written in Skt and Pischel (1880) has edited this work.

The aim of this paper is to present a list of *Dēsi* words which are found in *Dēsināmamālā* and which are of Dr origin. These words are given in comparison with the equivalent words found in DED. It should be pointed out here that only for nearly half of the words in the list the correspondences can be found from DED. However for the rest, correspondences have been given by the present author.

When we examine the list it can be noticed that the words given are of common nature and they could be notionally classified into class of words denoting Kinship terms (e.g.akkā, aṇṇa, aṇṇi, atta, appā, ammā, avvā, bhāva, māma, etc.), caste names (e.g. ceṭṭi, reḍḍi, oḍḍe, taleyāri, etc.), body parts (e.g. kurula, kavō, talam, dāra, madō, maī, poṭṭam, etc.), animals (e.g. pulli, illi, kira, kiḷi, mangūsa, karadi, pāvo, etc.) and the like. Upadya (1983) who has noted few *dēsi* words of Kannada origin is of the opinion that these Dr words could have gone into the Pkt language through the Jaina authors like Nēmichandra and Kunda Kundācārya whose mother tongue was Dravidian. However this remains to be tested with further data.

List of Pkt words of Dr origin

1. akkā (1.6) 'sister'
   Ta. Ma. akkā; *Ko.* akn; *To.* okn, okok;
   Ka. akka; *kod.akke; Tu.* akke, akke;
   Kol. akkā bāi; *Go.* takka, akka
   (DED 24)

2. aṇuiō (1.21) chik-pea
   (Dr.anamu)

3. aṇṇaō (1.55) 'elder brother'

   aṇṇi (1.55) 'elder brother's wife'
   Ta. aṇṇan, aṇṇi; *Ma,* aṇṇan; *Ko.* aṇ; *To.* oṇ; onoṇ; *Ka.* aṇṇo;
   ana; *kod,* anne; *Tu.* anna; *kol;*
   aṇṇāk; *Go.* tannal, tanharāi
   (DED 112)

4. atta (1.51) mother, father's *sister.*
   Ta. attai; *Ka.* atte; *Tu.* attē,
   Te. attē, attige; *Ga,* āta; *Go.*
   āti, *kuvi,* atta
   (DED 121)

5. addhamo (1.14) 'a mirror'
   Ta. attam; *Te.* addamu
   (DED 125)

6. appō (1.6) 'father'
   Ta. appan, appa; *Ma.* appa; *ka.* appa;
   kod. appē; *Tu.* appa, *Te.* appa;
   Go. āporāl, maipō; *kui.* āpa;
   kuwi appa.
   (DED 133)

7. amma (?) 'mother'
   Ta. ammā(l); *Ma.* amma; *ko.* amn, amnor, amna.; *ka.* amma, amā; *kod.* amme, *Tu* amma, *Te.* amma, ama, *kol.* amma; *Nk.* ammatak;
   (DED 154)

8. avva (1.5) 'mother'
   Ta. avvai; *ko.* av; *To.* af; *ka.*
   avve, avva; *kod,* avve; *Tu.*
   abbe; *Te.* avve; *Pa.* avve;

Go.
awwal.

(DED 232)

9. illi, pullı (vi.79) 'tiger lion'
Ta. pul, puli; *Ma.* puli; *ko.* puj;
To. pusy; *ka.* pulı; *Tu.* pılı; *Te.*
puli, pedda puli, bebbulı; *kol.*
pul, perpul; *Nk.* pul; *Ga.* berpul.
pullu; *Go.* pulli.

(DED 2532)

10. illīram ? 'the seat of an ascetic'
Ta. il; *ma.* il; *kod.* illaven 'man who is native';
Tu. illu; *Te.* illu; *kol.* ella. *Nk.* ella;
Pa. il podi; *kui.* idu; *kuwi.* illu.

(DED 420)

11. illo (1.82) 'poor, tender'
Ta. ila, ilam, ilai young, tender;
Ma. ıla tender, weak; *ko.* el time of youth; *To.* elk. ıd; *ka.*
el, ela, ele tenderness, weakness;
kod. elee; *Tu.* elantu, ele; *Te.*
leta

(DED 436)

12. udıdo (?) 'a kind of pulse'
Ta. uḻuntu; uḻuntu; *Ma.* uḻunnu;
ka. Urdu, uddu; *Tu.* Urdu; *Tu.* Urdu;
uddulu; *Nk.*urndal

(DED 594)

13. uḍḍō (1.85) 'men who dig wells'
Ta. oṭṭan

14. ubbūrō (1.126) more or greater abundant; unevenly raised (*Dr.* ubbu)

15. ummarō (1.95) 'the threshold of a house
Ta. Umpaḷam, umpiḷikkai 'land granted *rent-free* for the performance of services;
Ka. umbaṟi, umbarige, umburi, ummurige;
Tu. umboḷi a free-hold;
Te. umbaḷamu, umbali Free from Taxation

(DED 549)

16. ūrō (1.143) 'a village'
Ta. ūr; *Ma.* ūr, *Ko.* u.r; *To.* u.r;
Ka. ūr; *kod.* u.rı; *Tu.* ūru: *Nk.*
ūr.

(DED 643)

17. oppa (148) 'cleaning or polishing, precious stone with a touch-stone'
ka. oppu

18. kanci (ii.1) 'the metal ring at the end of a wooden pestle' *Te.* kanchu

19. kaṭṭāri (ii.4) 'a knife'
Dr. kaṭṭāri

20. kandi (11.1) 'a radish, an esculent root'
Te. kandi pigeon pea';
Pa. kerdi id.

(DED 1019)

21. karaḍō (ii.55) 'a tiger'
Ta. karaṭi Indian black bear; *Ma.*
karaṭi, *Ko.* kardy, *Ka.* karaḍi, kaḍḍi;
kod. karaḍi, *Tu.* karaḍi, *Te* karaḍi

(DED 1059)

22. kallō (ii.2) 'liquor, wine'
Ta. kaḷ; *Ma.* kaḷ, kaḷḷu; *Ka.* kaḷ. kaḷḷu, kallu; *Ko.* kaḷ, *kod,* kaḷḷi; *Tu.* kaḷi; *Te.* kallu; *Nk.* kal; *Go.* kal; *Kon.* karu; *Kui.* kalu; *Kuwi.* keru.
(DED 1158)

23. kallaviam (ii. 18) made wet, extended Dr. kal (?)

24. kasso (ii. 2) 'mud'
Ta. kacaṭu, kacaṇṭu unclearness, dirtness, dregs; *Ma.* kacci straw, stubble; *Te.* kosf. rubbish; *Ka.* *kasa, kasavu;* *Tu.* kajavu, kajavu; *Te.* Kasaṭu; *Malt.* kase; *Skt.* kaccara
(DED 916)

25. karam (ii. 26)
Dr.kara (?)

26. kāvi (ii. 26) 'blue'
Ta. kāvi 'red ochre'; *Ma.* Kāvi; *ko.* ka.yu; *Ka.* kāvi, *Tu.* kāvi, kāve; *Te.* kāvi.

27. kiro (ii. 30) 'a pig'
Ko. iirbn 'leopard'; *To.* kirme n.id; *Ka.* kiraba, kiruba id., kirabu, kuruba. kuruva, katte; *Tu.* katte, kurbe *Ta.* ciruttai
(DED 1331)

28. kiro (ii. 21) 'a parrot'
Ta. kiḷi, kiḷḷai; *Ma.* kiḷi; *Ko.* kily, *ka.* gili. gini; *kod.* gini; *Tu.* gili, gūnni; *Te.* ciluka; *Pa.kili Ga.* kilin
(DED 1318)

29. kuṇḍayam (ii. 63) 'fire place, a small pot'
Te. kuṇḍa, Ta. kuṇḍan

30. kunti (11. 34) ' a cluster of blossoms'
Ta. kottu 'bunch, cluster'; *Ma.* kottu; *ka.* kottu; Te. gutti
(DED 1741)

31. kuruḍō(11.63) 'unkind, clever'
Dr. kuruda

32. kurulō (11.63) 'curly hair'
Ta. kuruḷ, 'to curl, lock of hair', *Ma.* kurul. kūral; *Ka.* kurula, kuruḷ; *Tu.* kurumbilu; *Te.* kurulu, *Skt.* kurlu.
(DED 1494)

33. kullō (11.61) 'the neck; incompetent, tailless'
Ta. kuḷḷam, kuḷḷal shortness. *Ma.* kuḷḷan short man; *Ko.* kuḷ shortness; *Ka.* kuḷḷu shortness; *Te.* kullu
(DED 1526)

34. keō (11.44) 'a rope'
Ta. kayiṟu; *Ma.* kayaṟu; *Ko.* ki-rna-n; *Koḍ.* keri, *Te.* ceru
(DED 1051)

35. kōṭṭam (11.45) 'a town'
Ta. kōṭṭai 'fort, castle'; kōṭu 'stronghold'; *Ma.* kōṭṭa 'residence'; *Ko.* ko.ṭ.; *To.* kw.t 'bungalow'; *Ka.koṭe;*

Tu. kōte; *Te.* kōṭa
Skt. kōṭa, koṭṭa, koṭṭara
(1831)

36. kottchala (11.48) 'granary'
Te. koṭṭu

37. kolittam (11.49) 'a fire brand'
Ta. koḷḷi; *Ma.* koḷḷi;
Ko. koyḷ 'burning fire wood';
To. kwily; *ka.* koḷḷi;
koḷḷe; *Tu.*
koḷli, koḷḷi
(DED 1794)

38. kaṭṭikkō (11.70) a butcher
Ta. kaṭi 'to cut away';
Ma. kaṭiyuka 'to clear bamboos from thorns'; *Tu.* kaḍiyuni 'to be cut into two';
Te. kaḍi 'a morsel';
Kur. kaṭṭnā 'to divide; separate; *Malt.* quṭe to give'.
(DED 1125)

39. khaḍakki (?) 'a small door, window'
Ta. katavam, katavu;
Ma. katavu, kataku;
Ka. kada, kaḍavu,
kadahu 'leaf of a door, door;
Tel. kiṭu ku
(DED 998)

40. khaḍḍam (11.66) 'the beard'
Ta. kaṭṭam 'chin',
keṭṭam 'beard'; *ka.*
gaḍḍa; *Kod.* geḍḍa;
Tu. gaḍḍa, *Te.*
gaḍḍamu; *Kol.* gaḍḍam;
Nk. gaḍḍam;
pa. gaḍḍam 'beard,
Moustache'; *Go.* gaḍḍo,
gaḍḍoka; *Kon.* gaḍemu
(DED 1156)

41. Khaṇṇam (11.66) 'dug'
Te. kannamu

42. Khavā (11.77) 'the left hand'
Ta. kai; *Ma.* kai. kayyi;
Ko. ḳay; *To.* koy;
Ka. kay, kayi; *Kod*, kay;
Tu. kai; *Te.*
kēyi; *kol.* ki; *Nk.* kī.
kiyyu; *par*, key;
Go. kai; *konda.* Riu;
kui. kaju; *Kur*, khekkhā
(DED 1683)

43. khaḍḍam (11.74) 'small'
Ta. kuṭṭam, kuṭṭai,
Ma. kuṭṭan; *To.* kuṭ,
Ka. guḍḍim, guḍḍu;
kod, kuṭṭi; 'child of any caste';
Tu. giḍḍa; *Te.* giḍḍe,
giṭaka, *kui.* guṭa 'stump'
(DED 1670)

44. gaḍḍi (11.81) a car
Ka. gādi

45. gattam (11.99) 'the pole or shafts of a carriage, mud'
Te. gettamu

46. gumagumiam (11.93) 'fragrant'
Ta. kamakama;
Ko. gaml 'good smell of (food)';
Ka. kamma, kampu
'bad smell, *Tu.*
kammena, kamyana
smell, fragrance',
Te. kampu, 'smell,
odour'; *Kol.* kam,
kamp 'a smell'
NK. kap 'smell',
odour; *kur*
gamgamrna,

47. gonḍam (11.94) 'forest'
Te. konḍa

9A

48. gondī (11.95) 'a cluster of blossoms'
ka. goṇḍe (also see 30)

49. ghaṭṭō (11.111) 'a cloth dyed with safflower, the stairs of a landing place in a river'. (?)
Dr. ghaṭṭa.

50. gharō (11.108) 'a wall, rampart'
Te. gōḍa

51. cikkā (111.21) 'a small thing, a small stream'
Ta. cikka, ciru; *Ma.* cikkiṇi, *Ko.* cikn;
Ka. cikka, ciga; *Koḍ.* adaje; *Tu.* cikka;
Te. cikiciki *Skt-cikka*
(DED 2057)

52. ciccē (111. 10) 'fire'
Ta. kiccu; *Ko.* tic; *To* tit; *Ka.* kiccu,
Kircu; *Koḍ,* titti; Tu kuttu; kiccu,
kicci, kicce 'fire, envy';
Te. ciccu, *Kol.* kis;
Nk. kicc; *pa.* kic; *Ga.* kis: *Go.* kis; *Konda.* sisu; *Kui,* siso vaḍi 'a flint'; *Kur.* cicc;
Malt. cicu
(DED 1272)

53. cinca (111.10) 'the tamarind'
Ta. cintam; *Te.* cinta;
Kol. sintā; *Nk.* sitta; *Go.* sittāmara 'tamarind tree'
Skt. cincā
(DED 2086)

54. chāṇam (111. 34) 'cow-dung'
Ta. sāṇi

55. chikkōliam (111.25)
(see cikka. 50)

56. chippa (111.36) 'alms, the tail'
Dr. cippa

57. chillam (111.35) 'a hole, a hut, an opening'
Ta. illi 'small hole';
Ma. cilli-kkuttu a little hole'; *Ka.* jilli 'small hole in an earthen vessel';
Te. cilli.
(DED 2123)

58. chēttaram (111. 32) 'unserviceable or worn out utensils'.
Ta. cettai 'dry, rubbish dried vegetable matter';
Ma. cetta, ceṟṟa;
Ka. satte, sedage 'rubbish',
dirt', *Tu.* sede; *Te.* cettu 'dirt, trash'
(DED 2279)

59. jagaḍiō (111.44) 'tormented'
tel. jagaḍamu

60. joṇṇalio (111.50) 'corn'
Ta. cōḷam, coṉṉal 'maize, great millet';Ma. cōḷam;
To. swi. ḷam; *ka.* jōḷa;
Koḍ. jo.ḷa; *Tu.* jōḷa;
Te. jonna. jonnalu;
Kol. sonna; *pa.* jenna,
Go. jōnnang
(DED 2359)

61. jhaḍi (111.53) 'incessant rain'
Dr. jaḍi

62. theṇḍuō (111.59) a ball
Ta. ceṇṭu 'ball used in a game'; *Ma.* ceṇṭu 'a cotton ball'; *Ko.* œṇḍ 'ball used in games';
To. seḍ; *Ka.* ceṇḍu,
Kod. ceṇḍi, *Te.* ceṇḍu
(DED 2275)

63. ḍōō (iv. 11) 'a wooden spoon'
Te. ḍoki

64. nēsaro (iv.44) 'the sun'
Ta. nāyiru, nāyiru, *Ma.* nāyiru; *To.* no. r̲ *Ka.* nesaru; *Tu.* nesuru 'morning'; *Mal.* nir̲u 'sunshine'
(DED 2371)

65. taṭṭi (v.1) 'a hedge fence'
Ta. taṭṭi; *Ma.* taṭṭi; *Ka.* taṭṭi; *Tu.* taṭṭi; *Kol.* tadka
(DED 2464)

66. taḍa mado (v.7) 'agitated'
ko. daḍn, da-ḍal 'with a sudden jerk';
Ka. taṭakkane 'quickly', daḍadaḍane 'in hurry and flurry'; *Te.* tatukkuna 'at once, suddenly'
(DED 2451)

67. taṇṭam (v.1) 'the back'
Te. tunti

68. tannāyam (v.2) 'wet'
Tu. tannīr; *Ma.* taṉṉīr; *Ko.* taṉ; *To.* tonf; *Ka.* taṇ *'coldness';* *Kod.* taṇi. 'becomes cold'; *Tu.* taṉu 'coolness'; *Te.* taniyu 'to be satisfied or contended'
(DED 2473)

69. talam (?) 'the head man of a village'
Dr.talai 'head'
(DED 2529)

70. talārō (v.3) 'a town watch-man'
Ta. talaiyāri

71. tuppō (v.22) 'ghee'
Ta. tu 'to eat', 'try to enjoy'; *ka.* tuyyal 'a dish of rice'
(DED 2685)

72. dārō (v.38) 'a waist band'
Ta. tār, tāram 'cord, rope'; *To.* to.rm 'one string of bead necklace'; *Ka.* dāra 'string, thread'; *Tu.* dāra id. *Te* dāramu 'cord, twine'
(DED 3167)

73. paḍḍī (vi.1) 'a cow which is delivered for the first time'
Ka. paḍḍe 'maturity, fitness for breeding'; *Te.* paḍḍa 'female buffalo or cow fit for breeding'; kol. paḍḍa 'female calf'; *Nk.* paḍḍa 'heifer'; *Skt.* paḍḍida 'calf'
(DED 3208)

74. pāvō (vi.38) 'a snake'
Ta. pāmpu; *Ma.* pāmpu, *Ko.* pa.b; *To* po.b, *Ka.* hāvu; *kod.* pa.mbi; *Tu.hāvu;* *Te.* pāmu; *Kol.* pa.m; *Nk.* pām; *Ga.* bām
(DED 3361)

75. puḍho (v.52) 'a hollow, hole'
Ta. puṇṭai; *Ko.* piḍ; *To.piḍy* 'penis'
(DED 3509)

76. peṇḍam (vi.85) 'a piece, a ring'
Dr. peṇḍara

77. poṭṭam 'the belly'
Ka. poṭṭe; *Tu.* poṭṭe 'pregnancy'; *Te.* poṭṭe 'belly'; *Kol.* poṭṭa; *Nk.poṭṭa;* *pa.* poṭṭa; *Kur.* poṭṭā

'bowels'; *Malt.* pura
'belly'
(DED 3677)

78. phiḍḍo (vi.84) 'a dwarf'
Te. potti.

79. baliō (vi.88) 'fat, stout'
Te. bulabula

80. bulambulā (vi. 95) 'a bubble'
Te. bulabula

81. bhandi (?) 'a car drawn by oxen'
Ta. paṇṭi, vaṇṭi; *Ma.* vaṇṭil, vaṇṭi;
Ko. vaṇḍy; *To.* poḍy;
Ka. baṇḍi 'cart';
Te. baṇḍi; *Kol.* baṇḍi;
Skt. bhaṇḍi
(DED 3219)

82. bhāvō (vi.102) 'elder sister's husband'
Dr. bāva or bhāva

83. mangusō (vi.118) 'mongoose'
Ta. mūnkā, *Ka.* mungi, munigīsi;
munguli, mungili, mungali; *Tu.*
mungili; *Te.* mungi.
mungisa; *Kol.*
Skt. madgusa
(DED 4014)

84. majjiam (vi.144) 'looked at, drink'
Te. majjiga

85. maṭṭō (vi. 112) 'hornless'
Ta. moṭṭai 'bluntness, incompleteness'; mōlai 'hornless; Ma. moṭṭai. 'cattle without horns';
Ko. moṇḍy 'headless trunk'; *Ka.* moṇḍa, moṇḍu 'blunt, maimed'; *Tu.* moṇḍu; *Te.* moṇḍi 'maimed'
Skt. muṇḍa 'hornless'
(DED 4200)

86. malaō (vi. 144) 'a part of a hill'
Ta. malai 'hill, mountain';
Ma. Mala; *Ka.*
male; *Tu.* male 'forest';
Te-mala; pa.
malan; *Skt.* malaya
(DED 3882)

87. māi (vi.128) 'hair'
Ta. mayir; *Ma.* mayir; *Ko.* mi.r; *To.* mi.r;
Tu. jameri
(DED 3854)

88. māḍiam (vi. 128) 'storied house'
Ta. māṭam; *Ma.* māṭam;
Ka. māḍa,
māṭa, maḷai, māḷige
'a large building'
Te. māḍugu; *Skt.madi*
(DED 3930)

89. māmā (vi.112) 'maternal uncle'

māmi (vi. 112) 'mother in-law'
Ta. māma, māmi; *Ma.* *māman;*
To. mun, mumun; *Ka.*
māma, māvu;
Kod. māven; *Tu.* māme;
Te māma, *Kol.* ma. mak;
Nk. māma;
Gc māmuriāl; *Br.* māma
Skt. māmaka
(DED 3945)

90. muddhi (vi. 133) 'a kiss'
Ta. muttu, muttam;
Ma. mutti;
Ka. muttu, muddu; *Kod.* mutta.
Tu. mutta, muddu; *Te.*

muddu;
Kol. mud.
(DED 4063)

91. moggalō (vi. 139) 'bud'
Ta. mukil, mukai, mokku; *Ma.* mukil, *Ka.* mugi, mugul, mugalu; *Tu.* mugiyuni 'close contact' *Te.* mogga, mogadu; Kui. mogo; *Skt.* mukula
(DED 4007)

92. vaṅga (vii. 29) 'the egg'
Dr. vaṅga

93. vattivam (vii. 40) 'work done by others'
Ta. veṭṭi 'useless, worthless' *Ma.* veṭṭi, *Ko.* viṭu 'useless, in vain'
Te. veṭṭi
(DED 4506)

94. vaḍḍo (vii. 29) 'big, great'
Ta. toṭṭa; *Ko.* doḍ; *ka.* doḍḍa;
Tu. ḍoḍḍa; *Te.* doḍḍa;
Nk. dora;
pa. dora
(DED 2875)

95. vahuṇṇi (vii. 41) 'elder brother's' wife'
Ta. matani; *Kod.* madema;
Te. vadiniya, vadine
(DED 3838)

96. villam (vii. 88) 'clear pure'
Ta. veḷ, ven; *Ma.* veḷivu 'white';
Ko. veḷ 'true, white';
To. poḷ 'white'; *Ka.* beḷ, bela; belpu 'whiteness'; *Tu.* boḷu, belci; *Te.* velugu 'to shine'
(DED 4534)

97. sarā (viii. 2) a garland'
Te. saramu; *Ta.* saram

98. seṭṭi (viii. 42) the headman of a village
Dr. seṭṭi.

99. sōmāī (viii. 39) 'addicted to sleeping'
Te. sōmāri

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USE OF AUDIO-VISUAL AIDS IN FOREIGN LANGUAGE TEACHING*

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This article might well be retitled 'A critical Evaluation of the use of Audio-visual aids in foreign language Teaching'. It gives a brief account of different kinds of audio-visual aids and their role in foreign language teaching and evaluates critically their use in language teaching in three major dimensions namely, theoretical, practical and attitudinal. While attempting to do so, this paper does not extend its scope beyond the purview of teaching Indian and European languages in schools, colleges and universities.

The author is aware of the recent developments in English Language teaching. Despite numerous foreign language pedagogical researches which include both sociolinguistic and psycholinguistic experiments, scarcely they have made any impact on teaching Indian and European Languages, other than English in schools and university departments. Particularly, the use of audio-visual aids is comparatively a less attractive technique in language teaching even today. The audio-visual aids have not yet been blessed with the proper recognition and total approval of language teachers in the business of language teaching. This paper attempts to find out the reasons for this state of affairs with a view to improve audio-visual teaching in Indian schools and universities.

Audio-visual aids are broadly classified into three, namely, visual aids, auditory aids and audio-visual aids. The visual aids are those items which could be seen or shown by the teacher at the time of teaching a word or structure of a foreign language. They include blackboard, charts, flipcharts, flash cards, flannelgraphs, opaque transparencies, cut-outs, maps, the books, class room articles etc. The auditory aids are those items that could 'speak' themselves. They include gramaphone discs, tape-recorders, language laboratory etc. The audio-visual aids have the function of attracting the learner's eye and ear. They include film-strips and slides with commentaries, films, television etc. We could go further and subcategorize each type into several subtypes. For instance, the visual aids may be categorized in various ways--moving, still, three dimensional, written etc.

The above categorization has, of course, no serious pedagogical validity. However, it helps language teachers to choose them on the basis of their suitability to the given situations. Different settings demand different aids depending on the language skills

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to be developed.

Audio-visual aids are not aids themselves. They anticipate from the curriculum planner and language teacher their placement in the gamut of language teaching and their priorities and order. Use of audio-visual aids will be a failure if no proper planning is made by the teacher.

Technology has made a breakthrough in the field of education in general in India. Its benefits are being widely recognised and increasingly utilized to improve and strengthen the educational structure in the subcontinent with all socio-economic hardships. If the objective of our formal education is to enrich and sustain the quality of instructional methods, medium and materials, we cannot dispense with modern developments in educational technology. They have become indispensable and proved that they would be of immense help to educational planners to improve the efficiency of teaching and to disseminate knowledge in the shortest possible time. And also, the developments in technology have now made the art of teaching more scientific and exposed its multi-dimensional facets such as micro-teaching, team-teaching, audio-visual teaching, distant teaching, individualized instruction, programmed instruction etc.

Among them, audio-visual teaching is particularly becoming very common in our schools, colleges and universities. They have almost become inseparable from text-books as far as subject teaching is concerned. Whereas, use of audio-visual aids in foreign language teaching is not in vogue in schools, colleges and universities. The reasons are multifarious. They are partly theoretical and mostly practical and attitudinal.

One of the reasons is theoretical in the sense that the language teachers are the best consumers of the theories produced by the linguists. But the produce is not served to language teachers on the basis of their demand nor on the basis of the recommendation of the educational planners. Therefore, consumers are always choosy and at times they see a paradoxical development in pedagogical theories. Let me elaborate this point.

It may be premature to talk of recent theoretical developments in foreign language pedagogy in Indian context, particularly with reference to teaching of Indian or European Languages. The various theories of language pedagogy in applied linguistics have not yet convinced Indian language teachers of their importance in language teaching. Eventhough the planners of language education are familiar with many learning theories, seldom they are integrated with practice. The reason may be that the educational planners could not be convinced by linguistic theories. Or, it may be the problem of applying principles of theoretical linguistics into language teaching. Whatever may the reason be, there is not much impact of the language teaching theories of applied linguistics on Indian language pedagogy.

However, it will not be out of Indian context if mention is made about a sociolinguistic theory which indirectly concerns with the use of audio-visual aids though not directly. This theory is based on the concept of 'communicative competence'.

It is founded partly on a linguistic theory which incorporates appropriate sociological parameters and partly on a theory of speech in situation. This theory has recently begun to direct language teachers toward an increased understanding of 'competence vs. performance' on the one hand and 'communicative competence' on the other and their relevance to language pedagogy. Consequently, new theoretical and methodological concepts have emerged and old theories were proved inadequate. The classical pedagogical theories such as audio-lingual theory which is based on behaviourist psychology and structural linguistics and cognitive-code learning theory which is an amalgam of cognitive psychology and transformational grammar have been questioned for their validity in foreign language teaching. These two theories lay more emphasis on the acquisition of grammatical rules even though the means to achieve them are basically different.

But, the language teacher is equally concerned with the social uses of langauge and the way the language functions in the everyday business of communication in addition to the grammatical rules of the language. "That is, knowing a language involves not only a knowledge of the formal properties of the language as a system but also a knowledge of how this system is put to use in the performing of social actions of different kinds. In other words, knowledge of language is not only a matter of grammatical competence but also of communicative competence. If communicative competence is to be taught, the teacher needs to make reference to the kind of information that only a sociolinguistic approach to language description can provide. (Pit Corder, 1973)". This has been variously understood by the teachers, teacher trainers, educational policy makers and producers of instructional materials. However, the central theme of teaching language as communication has become the slogan today in the midst of applied linguists.

Wilkins says, for instance, "Language learning is not complete when we have acquired a 'general' language system. We can, it is true, understand and make ourselves understood, but we will not yet be producing entirely acceptable forms of language. We cannot possibly work out for ourselves which of the many grammatical modes of expression we should use in a given situation. There may be several semantically and grammatically acceptable ways of saying what we want to say, but only one that is stylistically acceptable. It is as true of the second as of the first language learner that he cannot master these features unless he experiences the forms of language in association with features of the non-linguistic situation (Wilkins, 1972). Widdowson, on the other hand says, "it is after all one of the principles of the modern approach to foreign language teaching that sentence patterns and vocabulary should be taught "contextually" in meaningful situations. But it is not true. They are all created situations. Classroom mock-ups of railway station, the bus stop, the office etc., are devices for stimulating the learner's interest rather than for teaching an ability to handle language in the real world. It may provide a stereotyped linguistic routine but this is not the same as providing the learner with a stra-

tegy for matching linguistic forms with communicative functions (Widdowson, 1975)."

Language teaching, therefore, is now placed in a social perspective. It is described as an activity which aims at developing in learners certain forms of social behaviour. It is not just teaching various abilities. Language is not a separate entity of this kind. It is, on the contrary, bound up with other aspects of human life. With the result, it has become fashionable today to demand a 'communicative approach' in foreign language pedagogy. This approach is expected to enable the learners to acquire the ability to perform in a truly communicative setting. Another flourishing innovation is 'language immersion' which is variously interpreted by the curriculum planners and language teachers. Both these approaches basically aim at making language teaching more communication oriented and make the learners sensitive to the various social contexts. They emphasize more of authentic conversational transactions than of a set of decontextualized or socially liberated expressions. The use of audio-visual aids in these approaches is minimised and very seldom they warrant their roles in teaching linguistic or paralinguistic or situational factors of the foreign language. In addition, there is every likelihood of having a pedagogical danger of teaching an 'unauthentic' langauge if more audio-visual aids are put into use in these approaches. It is, therefore, paradoxical in the theory of second langauge pedagogy to give more importance to audio-visual aids to develop simulated communications on the one hand and to develop language learning in 'real' situations on the other.

A surprising number of reasons for non-use of audio-visual aids in foreign language teaching in Indian schools and universities are practical and attitudinal as indicated earlier. It is not hard to know the awareness of the use of audio-visual aids among school and university teachers. Yet, they fail in effective implementation because of certian practical reasons such as i) the poor response of students to audio-visual aids ii) lack of suitable instructional materials which can go along with audio-visual aids iii) lack of teacher training and iv) teacher's attitude toward the use of audio-visual aids. Let us see in detail.

A good language teacher will not ignore the benefits of audio-visual aids. When he attempts to use them to teach a word or structure he is not seriously concerned with the size and sophistication of the aids. He is more concerned with their teachability. That, in turn, will be amenable to him to show his professional ability. Therefore, the best use of an audio-visual aid largely depends upon the organising faculty of the teacher too. A well-designed aid will be a failure in the hands of a poor teacher. At times the learners too contribute to failure. The reasons, in the Indian context, are closely tied up with educational and socio-economic factors.

To many students, in the higher level of education, audio-visual aids do not seem to be aids to develop language use. They feel embarrassed whenever they are introduced to audio-visual aids. The reason is educa-

tional in the sense that they are not previously exposed to audio-visual langauge teaching. The school or college curriculum, eventhough includes audio-visual aids, very rarely they are used in language or subject teaching. The various socio-economic problems of students are in no way less contributory to this state of affairs. The children who are both socially and economically underprivileged do not find the opportunity to have audio-visual teaching in their schools.

It will not be out of place if a brief mention is made about the present status of the Indian University departments where foreign language instruction is part of their programme and their attitude towards the use of audio-visual aids in language instruction. Over the years, the Central and the State Governments have instituted several organisations all over India to focus on problem solving oriented research in lengauge pedagogy and materials production. Of them, the Central Institute of Indian Languages and the Central Institute of English and Foreign languages have been giving due consideration to the problems related to the teaching and materials production of Indian and European languages respectively and proper thought to the various constraints peculiar to each pedagogical problem. However, the research findings of these institutions could not make any serious impact on second language pedagogy and materials production, either as far as the Indian University departments are concerned. It is beyond doubt that the research findings of the Central Institute of English and Foreign Languages could make welcome changes in the pre and post secondary school curriculum of English language. At the sametime, it is an undeniable fact that more than ninety percent of the schools in the subcontinent could not be attracted by these findings by one reason or the other.

The condition is not palatable in the case of university departments which teach Indian or European languages to foreigners. The languages are considered like other subjects in the university education and even the distinction between the language teaching and the subject teaching is not understood by the language teachers (Pattanayak, 1977). The languages are taught almost as subjects in Indian universities at the level of Certificate and Diploma Courses. If at all it is maintained the school primers that are used for teaching the target language as mothertongue will have key role in teaching the same as foreign language. They lack appropriate method and materials. Added to that, the language teachers who are really the masters of the literature of one foreign language or the other are confident enough in teaching the language from scratch and they think that no professional competence is required to do so.

The linguistic departments in Indian Universities are in no way exceptions to this, eventhough many of the linguistic theories are grounded in the classroom. There is a yawning gap between theory and practice and many linguistic departments which have undertaken foreign language teaching as part of their programme stand as concrete evidence to the continuing tradition of teaching a foreign language as mothertongue.

The sociolinguists and psycholinguists who are interested in the didactics of languages should, at least, make the language teachers of the linguistics departments to assess the methods and materials used by them from time immemorial.

Another important problem is that the teacher-member of the university departments have not realised yet the distinction between teaching a language and teaching about a language. Most of the teachers in the university departments teach the grammar and literature of the target language in the disguise of foreign language teaching. They allow their students little or no opportunity to use the language, and seldom use it themselves. The students are expected to recite conjugations of verbs and declensions of nouns and to provide illustrations from the target language for grammatical points. A good deal of time is devoted for translation from English to target language and vice versa. Translation is almost used as a method to teach Indian or European languages where English, in which the students are less proficient, is used as medium of instruction. The reasons why this should be so are, of course, complex, but one important factor that recurs frequently is that the teaching of Indian or European languages in the university departments is often in the hands of language teachers whose training is in literature alone (Halliday et al, 1964).

A successful foreign language teaching is possible only when they are trained in foreign language pedagogy and materials production. One need be neither surprised nor upset by this condition in our university departments. What is basically required is training to enrich professional competence in teaching foreign languages in a true sense. But the opportunities are too seldom for the language teachers other than English. The universities should find out ways and means to organise training courses for them and to see that the teacher training institutions which represent traditional professional expertise and methodology should come forward with an open mind to terms with the new developments in foreign language teaching.

Use of audio-visual aids in teaching languages in the university departments is an unknown technique. Even today, the importance of audio-visual aids in foreign language teaching has not been fully recognised by the language teachers. We see many institutions which pay more attention to the theory of foreign language teaching which, of course, includes audio-visual teaching, but rarely practice in reality. The reasons may be manifold as i) The audio-visual aids are not popular among teachers and students ii) the audio-visual aids could not convince teachers of their usefulness iii) the cost of the audio-visual aids which is beyond the reach of many institutions iv) the problems of synchronising audio-visual aids with instructional materials v) the reluctance on the part of the language teachers to experiment with new methods vi) lack of understanding the uses of audio-visual aids and their order and priority in language teaching vii) lack of qualifications and skill on the part of the language teachers in using them in the classroom viii) the failure in familiarizing audio-visual teaching among the students etc. To top them

all, most of the university language teachers have the feeling that it is far below the university standard to use audio-visual aids in adult langauge teaching. It is a very painful experience to many enthusiastic language teachers to have said by many educational planners that foreign language teaching at the university level was ridiculous and the universities could very well be deprived of it.

Another important reason is the language teacher's fear of the responsibility that falls on him to prepare greater varieties of materials on the basis of different audio-visual aids (Halliday et al, 1964). Most of the Indian university departments have one language - one teacher programme; so the single teacher hardly finds time to prepare suitable materials which can go along with audio-visual aids. When technological aids are introduced in language departments the universities hardly think of expanding staff structure in proportion to the demand created by the technological aids. This disproportion has made audio-visual techniques a failure in language teaching. Installation of language laboratories in the various university departments may be cited as an example.

Over the last few years, a good number of Indian universities have installed language laboratories. Language Laboratory is a powerful auditory aid which could speak itself, enlist learner's ears and call for imitation. The maximal use of this electronic classroom solely depends upon the appropriate materials prepared by the language teacher. Unlike the conventional classroom materials, the language laboratory materials demand prior and meticulous planning and sufficient time for tryouts. Contrary to our expectation the language laboratories in the Linguistics or foriegn language departments in Indian universities are mostly lying idle without trained teachers and materials. The other electronic gadgets like tape recorders, overhead projectors, slide projectors, closed circuit Television system, film projectors etc., are kept as status symbols almost without putting them into proper use. They are limping with scant material without proper planning.

The reasons are lack of personnel and training. It is true that there is no dearth of expertise available to train English language teachers. But, the language teachers who teach Indian and other European langauges do not have the privilege of acquiring professional competence through organized training courses. If possible, these language teachers can have general training in second language pedagogy and materials production under English language experts. The language specific training can be imparted later with the help of available local expertise and by keeping in touch with current trends and development in the science of language pedagogy.

In this brief account of the use of audio-visual aids in language teaching and of the problems involved in using them effectively it has not been possible to suggest remedial procedures. It is hoped that the problems discussed in this paper will stimulate various researches, so that the use of audio-visual aids in foreign language teaching will be suitably recognised by the curriculum planners and language teachers.

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Nannan of North Malabar

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A great chieftain, Nannan was mentioned in Sangam literature belonging to the period from 1st century A. D. to 3rd century A. D. The Chieftain, Nannan is said to have ruled from ēḷil hills. Now it is called as ēḷumala in Malayalam. Nannan's kingdom comprised of ēḷil hills, Konkāṇam and Pūḷi Nāṭu in North Malabar. He had within his territory a town called Pāram which was said to be his capital. Pāram has been identified by me by field study. It is a village bearing the same name now and it is about 15 miles to the north of Cannanore. Pūḷi Nāṭu can be identified roughly as the territory to the north of Mahe, a Ex-French possession where you can still find a village called Pūḷitalai which was the northern limit of Pūḷi Nāṭu. In Malaipaṭukaṭām, a work which can be placed latter than Akanānūṟu, Naṟṟiṇai, Kuṟuntokai which are earlier works, a king called Nannancēy–Nannan is mentioned as the ruler of Palkunṟa Nāṭu (country of many hills). Although some Tamil scholars have confused the Nannan of the Palkunṟa Nāṭu with the Nannan of Konkāṇam, there is no basis for such identification as the Palkunṟa Nāṭu comprising of the present Tiruvannamalai and Sengam hills is nearly 500 miles East of Mount D'eli (Ēḷil hills) and could not have been ruled by one and the same king. The Malaipaṭukaṭām poem specifically describes the hero as Nannan, son of Nannan. The reason for the migration of the son of Nannan who ruled in North Malabar in the West coast to the Sengam hills in the North Arcot District can be gathered from the Akanānūṟu Poem (199) wherein Kallāṭanār had said that the Chera King Nārmuṭi Cēral defeated and killed Nannan of Puḷi Nāṭu. Patiṟṟupattu which gives the geneology of the ancient Chera kings of Sangam period also says that Nannan was defeated at the hands of Nārmuṭi Cēral and the titular tree of Nannan was also cut off by the Chera king. It looks obvious that after Nannan who was the ruler of Konkāṇam was killed, his territory was regained by the Chera king. Nannan's son left North Malabar and founded a kingdom in 'Seṅganmā' near Tiruvannamalai. Nannan of North Malabar is called Nannan of Konkāṇam. Udiyan Nannan and Nannan Vēnmān are his other names found in Sangam poems. When he acknowledged the suzerainty of the Chera king Udiyan, he assumed the name of Udiyan Nannan.

The exact derivation of the name of the hill can be found out only from sangam poems where it named and described. The veteran Tamil Scholar, U.V Swaminatha Iyer in his gloss to a Kuṟuntokai

poem (130) has said that the word 'ē̱ḻil' meant also a tree which is called 'ē̱ḻilaipālai'. Hence, it has to be concluded that the hill 'ēḻil' got its name from the preponderent occurrence of the tree 'ēḻil' in the hill forests. On a field study, I noted that the tree, Alstonia scholarsis which is 'eḻil pālai' did occur in natural condition in the forests of the hills and it is appropriate that the hill was called by the name of the tree in Sangam period. It is well known that some of the ancient towns in Tamil Nadu got their names from the plants with which they were associated. The famous Pallava Capital Kāñci got its name from the tree, Trewia Nudiflora and Vañci, the Chera capital from the tree, Salix tetrasperma. Even Koṟkai, the ancient sea port of the Pandya kingdom probably got ~~its~~ name from Koṟku, the Indian laburnam which bears most beautiful drooping clusters of golden flowers. The name of Koṟku occurs in Sangam literature in Naṟṟiṇai (302).

In the commentary of Kuṟuntokai poem (138), U. V. Swaminatha Iyer, it is said,

Ēḻili oru malai, itu naṉṉaṉ eṉpavaṉukku uriyatu.

ēḻilaippālai eṉṉum maramum ākum.

Since the commentator has not done any field study in the hills, he could not say how the hill derived its name from the predominance of the tree Alstonia scholarasis. There is a confusion in the commentary as *nocci* was grown. They are even now grown as household tree for hedges as mentioned in Sangam poems. The girl who pines over her lover could not have even a nap the whole night and hence she could hear the soft noise of the faded flower dropping in the night. The pining girl could not have heard the tiny flower falling from the tall hills. Another commentator, Avvai Duraisamy Pillai has written that the ēḻil hill got its name due to the fact that hills looked like a *yāḻ* the original and ancient stringed musical instrument of the ancient Tamils. But on my field study I found that the hill does not in any way look like a *yāḻ*. It is a fanciful derivation. Perhaps Avvai Duraisamy Pillai might have been led to guess because the word eḻāl meant the high pitch in Tamil music.

The tree ēḻil, Alstonia scholarasis is even now very important in Kerala rituals and folk worship, as it is the tree of the mother goddess, Bhagavathy. I found the stem of the tree being riddled by big iron nails by worshippers in order to fulfil their vows for favours in Chottanikara Bhagavathy temple near Cochin. This tree is also associated with devil worship in Kerala. In order to propiate the Goddess Bhagavathy, the common people in North Malabar make icons mostly out of this tree. Ēḻil hills was called in popular usage as *eli malai* and later it was translated as *Mushika Parvata*. Such popular transformations are like Hamilton's bridge becoming *ampaṭṭan vārāvati* and Ellis Choultry built by the efforts of Colonel Ellis, I.C.S. as *eḻi cattiram*. The same sort of folk usage occurred in the name which was translated in popular usage in medieval ages in Malayalam as *eli malai*.

In 13th century there was a kingdom called *Mushika vamsa* wrongly translated in popular usage. The particular tree is still called in Malayalam as *eḷilam Pala.* But the Sanskrit name of the tree, *saptaparni* clearly signifies the correctness of the Tamil name.

Morco Polo called the kingdom of Naṉṉaṉ as 'ēli kingdom'. Ibn Batuta called it as 'Ili kingdom'. Later the Europeans called the kingdom as 'Mount D'eli'. It is a precipitous hill on the sea side. It is because of this premonitary, sea voyagers from sangam times to the medieval times of Ibn Baṭuta preferred this port. When I visited ēḷil hill ten years before, I had to cross two rivers by boat and had to walk three miles to reach the hills.

There is a legendary treatise in Kerala called 'Chandrotsavam' belonging to 13th century, in which Mushika vamsa had been mentioned. The ancient history of Kerala cannot be traced unless one knows the Malayalam traditions and Tamil literature both ancient and medieval. Strabo, the Greek historian talks of a kindom 'Mousikanos' in the far south of India. This kingdom could not be anything else than the Mushika kingdom. Mushika Kāṉam has been mentioned as 'Mousikanos' by Strabo. Some historians have identified the place as lying in the eastern portion of the Sind Valley. Professor Roy Choudry, the historian has held it that it is the Mushika kingdom. There are others who identify it as the land where the River Mushi flows, that is around Hyderabad city; but, Professor Roy Choudry's conclusion seems to be correct. Naṉṉaṉ's kingdom of ēḷimalai was contemperaneous with Chera kingdom, in Sangam period.

In Mushika vamsa, the name of Naṉṉaṉ and Mūvaṉ are mentioned. Mūvaṉ was mentioned in Puṟanāṉūṟu (209). Mūvaṉ and Mūvaṉ Sēy are also mentioned. A sangam poet is called 'Ammūvaṉ'. The names seem to be peculiar to North Malabar usage in Tamil in Sangam period. The names of Naṉṉaṉ and Naṉṉaṉ sēy are found in Sangam literature. The name of Naṉṉaṉ is found in Sangam poems as well as Patiṟṟupattu, but the name of Naṉṉaṉ Sēy is found only in Malaipaṭukaṭām of Pattupāṭṭu which is a later work in Sangam period. It is said in a poem in Naṟṟiṇai that Cheraman Kanaikāl Irumpoṟai killed Mūvaṉ in the battle field and pulled his teeth and exhibited them on the door of the city of Thondi, a famous port noticed by Roman and Greek historians. The poet Ammūvaṉ had sung about the towns of Thondi and Vanchi and as such he has to be considered as a poet from the Chera Kingdom. The name of Naṉṉaṉ is not used as a popular name of Tamil Nadu but I noticed that this name was still used by the fisherman of Nileswaram in North Malabar which is very near to ēḷil hills. But the word Naṉṉaṉ is pronounced as 'nannaṉ' as dental not as 'naṉṉaṉ' with alveolar, as found in Sangam literature which shows that the name is not correctly spelled in the editions of Sangam works. It is seen that the name Naṉṉaṉ occurs in Chola inscriptions belonging to 11th century A.D. as the names of the shepherd caste in the famous Tanjore Peruvuṭayār temple.

"Cātta maṅkalattu irukkum iṭaiyaṉ kaṇṭan karuvēlaṉum .... nannaṉ nīlaṉum." The inscriptional usage of Nannaṉ shows that the Malayalam folk usage of nannaṉ is correct and not the literary usage in the Tamil editions of Sangam literature.

The eḻil hill is surrounded on three sides by water but on the western side it is surrounded by sea. Because the hill is surrounded by rivers on two sides and the sea on the western side, it is not possible to approach the hills. Now it has been made easy to approach as ēḻil hills have been made as a tourist centre with the bridges to cross the rivers. I had to cross two rivers by boat at a place called Punnaikaṭavu and Koṟṟipuḻai to reach ēḻil hills. This place was in the midst of a thick forest of Koṟṟikaṭavu. There is a big rock which is called 'Ammarakkal.' The rock is worshipped every 12 years by the common folks. I think that the region around the rock may be the Paḻi of Naṉṉaṉ. It is also seen that Miñili, a chieftain under Naṉṉaṉ won and captured Atikaṉ who was the chieftain of the kingdom who ruled at Tagadur, in the present Dharmapuri district and sacrificed him to the devil which was the mother goddess as per the information given by the Sangam poem Akanāṉūṟu (142). In this conection two important points have to be considered. The connection of the names Atikamāṉ from Satyaputra and also Emeneau's deduction on linguistic grounds proved to be correct. The Atikaṉs and Naṉṉāṉs were only Chieftains under the suzerainty of Cheras who later asserted themselves as kings throwing the suzerainty of the imperial Cheras of Sangam period.

There is a place near ēḻil hills called Koṟṟiyūr. Koṟṟikaṭavu and Koṟṟipuḻai are names of the rivers and the river port. We may conjecture that this Ammarakkal may be the spot where, as per the Akanāṉūṟu poem, a powerful devil goddess resided. Avvai Duraisamy Pillai identified that 'Paḻiclambu' was Patkal in South Kanara. This identification is based on the similarity of sounds in the two names. It is wrong as Patkal is far off from Naṉṉaṉ's ēḻil hills.

Pāḻi valley must be in the ēḻil hills. It is said in the commentary of Mayilainathar that the people of Pāḻi call the small water tank as Pāḻi. Naṉṉaṉ's Paḻi is mentioned in Sangam poems. In Akanāṉūṟu Poem (375) it is said that Iḷamperuñcheṉṉi destroyed the fortified Pāḻi. That is why the king was called as the king who destroyed the standing army at Pāḻi. Naṉṉaṉ had a standing army at Pāḻi from the reference to aruñi-kaṭippāḻi. In the 4th decade of Patiṟṟuppattu, it is said that the Chera king Nārmuticēral who was dispossessed of his distinctive crown defeated Naṉṉaṉ at the border of 'Kaṭambiṉ Peruvāyil,' the portals of the kingdom of Kadambas after overrunning the kingdom of Naṉṉaṉ. It is seen that near ēḻil hills there is a seashore village called Seruvattūr. There are two parts of the village which are called 'Kāri' and 'Ōri'. These names obviously refer to the folk memory of the magnificent donor, the tribal chieftains of the last sangam period, Kāri and Ōri who ruled their kingdoms under the suzerainty of the Cheras. The tract which the tribe of Kadambar ruled was later annexed by Mayurasarman, leader of the Haiga

brahmins who migrated to South Kanara from North India and was supposed to have established the Kadamba kingdom by the right of hypergamy and by the strategem of marrying tribal princess.

It may be noticed, at about the same time when Mayurasarman ruled, the Pallavas also traced their origin from Brahmin-Naga alliance. The Koundinya kingdom in the far east in Indo - China, Funan was considered to have been established by a Brahmin koundinya from Kāñci who married the princess of Funan. There are references to the settlement of Koundinyas in Tamil Nadu in Sangam literature. Among the Aryan Brahmin migrants who settled in Sangam period there are *Kavuṉiaṉ* who were the Koundinyas. The famous Saivite saint Gnanasambandar belonged to the Koundinya gotra. Other Brahmin migrants in Sangam period were the Vadamas and Vadulas. A poet belonging to the Vadama clan was engaged in the mundane profession of assaying gold. There were Aginihotra brahmins in Chera country in the Sangam period whom the Chera king gave the village Ogandur as a gift to grow the *Othira* paddy. At the time of Mayurasarman and earlier, the kingdom of Satavahanas existed beyond the northern limits of Tamilagam. The Satavahana kings who were brahmins married Naga princesses. It is a kingdom established by the right of hypergamy like the Pallava kingdom. The Banarastra kingdom seems also to have been established by the right of hypergamy. *Pāṇar* in one poem of Akanāṉūṟu is explained as a warlike tribe by the oldest commentator. Maḷavar is also explained as a young warlike tribe. In this connection we have to consider the Sutram of Tolkāppiyam *maḷavum kuḷvum iḷamaippoṟuḷ*. Sangam literature refers to Iḷayar also who were considered as warrior according to the old Akanāṉūṟu commentary. After the Sangam period which may be from the first century A.D. to the third century A.D., kingdoms arose in the South whose origin can be atributed to Brahmin and Kshathriya domination by hypergamy and vedic influences and miscegenation with the local tribals.

There is a reference to *Pāratuttalaivaṉ āra naṉṉaṉ*. Professor Vaiyapuri Pillai has given explanation about *āra naṉṉaṉ* as the chieftain who became king. It is a very valid explanation.

The tradition of Mother Goddess worship is very strong in the territory where Naṉṉaṉ ruled. In Sangam times, Naṉṉaṉ was called as the ruler of the Kanam, the forest. A famous Mother Goddess of the forest *Kāṉamarcelvi* of eḻilmalai is mentioned in a Sangam poem. Naṉṉaṉ himself is said to have possessed many fine and thorough-bred horses through the grace of this Mother Goddess. The Kāṉam territory over which Naṉṉaṉ ruled is still called Kānhangāḍ (Kānangāḍu) and the Bhagavathy of the territory is still worshipped as the foremost mother goddess. There is also a place called Kānattūr in Kānhangāḍ. Besides, the worship of Vana Durga and Devi is widely prevalent even now in the area. The Koṟṟi of Kānhangāḍu, a mother goddess who is still worshipped was called in Sangam period as the *Celvi* of *Kān* (forest), the fertility goddess of the forest. Even

now, there are many shrines of Devi in this area. A special type of bachelor priest called *Maṇiyāṇi* does pujas in these shrines. There is also a special caste of priests, Piḍāraṉ still found in this region practising Devi worship and they seem to have been imported from Tamil Nadu during the Chola regime. Piḍāraṉ was the priest of *Piḍāri* temples in Tamil Nadu in Chola period and *Piḍāri* was a particular manifestation of the malignant mother-goddess. Even the Bhagavathy of Tulu Nadu is called *Tulukānāṭṭu Amman* in Tamil Nadu and personal names like Tulukānam is still prevalent among the backward classes. This shows that the tradition of the Mother Goddess having been associated with the forest of Tuḷunāṭu region is a very ancient one existing from the first century of the Christian era.

A major part of the area ruled by Naṉṉaṉ was later called Vanavāsi during the Kadamba rule. Vanavāsi meant the Mother Goddess of the Vana (forest) which is again a translation of the Kanamarchelvi of Sangam period. Later the kings of the Kadamba dynasty established by Mayurasarman called themselves as the devotees of seven mothers and Subramanya. The tradition of the worship of Mother Goddess continued from Sangam period until recent times.

It can be conjectured from the references in Tamil literature of the Sangam period that Naṉṉaṉ started his life as a General in the army of the Chera king and then became an independent chieftain. It is remarkable that the existing tradition in the region of Mount D'eli still tells that the territory was ruled by a chieftain Naṉṉaṉ called Nāṭuvāḷi in Malayalam. The word *vāḷi* with the same meaning was used in Tamil Nadu during the ninth century in the name of the Saint Tirumangai Alwar as Kuraiyalūr Vāḷi in Nālāyira Divya Prabhantham. The same tradition is seen in the name of Kuruvāḷchcha of Chirakkal Kovilagam in later Malayalam tradition. Malayalam language has preserved much more puritanically some of the ancient Tamil tradition and usages. *Vāḷi* is a word denoting a chieftain or a petty ruler, but even during the Sangam period, the word *Vāḷi* occurs in Patiṟṟupattu (56) and later in the Pallava period, the term *kōvāḷi* began to signify an emperor or a king who ruled over the chieftains. In the 9th century inscription of Tānuravi, the Chera king, the name of *Nādu Vāḷtutal* clearly indicates a king or chieftain, which follows the tradition of the Sangam usage. In Patiṟṟupattu a king is called 'Selvakadunkō Vāḷiātan' The word *Kōvāḷi* is significant since the Pallavas in their inscriptions as evidences by the usage of this term in the Tēvāram poems of Appar who belonged to 6th or 7th century A.D. In order to emphasise that they are legitimate rulers and emperors the Pallavas used in inscriptions such Tamil terms like 'Kōvijaya', a typical hybrid term which can be traced to the sangam term *kōvāḷi*.

That Naṉṉaṉ was only a chieftain who later on became a king on his own is attested by the Sangam poems. If you look into the medieval history of Tamil Nadu it is seen a chieftain or a general or a tribal chief becomes more

powerful than the king himself and challenges the king's supermacy. Nannan was exterminated because he asserted his independence in North Malabar from the Chera suzerainty. He became powerful as a general of the Chera imperial army as evidenced in the Sangam poems.

Nannan belonged to a group called Vēḷir who had marriage alliances with the kings of Chera, Chola and Pandya kingdoms and some Sangam poems say that Nannan belonged to the Vēḷir caste of very ancient times (Toṇmutir Vēḷir). Tuluva Vellala is a prosperous and progressive caste in Tamil Nadu and they migrated from Tulu Nadu to Tamil Nadu in ancient times.

There are certain traditions about the rule of Nannan in Sangam literature which still persists in North Malabar and South Kanara. Contemporary field studies have yielded reliable information to correlate the information in Sangam literature and the present persisting traditions. Near and around Pāram there are insignificant villages. There are strong tradition in these villages about Nannan. Pāram is a village which could be reached by me by jeep in 1968 as there was no proper motorable road. Surrounding Pāram, there are mainly Parambu, vast plateaus with a soil which is generally called in Tamil as 'Murambu'. Nannan's parambu is specifically mentioned in Akanānūṟu (356). Pāram is very near Panaiyāl village. There is a small mound which is called kōṭṭapārā. People say that there was a fort built by a king of the low caste Madigas whose name was Nannan. He manufactured and issued leather coins. There is only one king known in Indian history who introduced leather currency and that is Tughluq. It is extraordinary that such a story is attributed to Nannan. But it is untrue and is only a folk legend.

Nannan did not belong to the low caste of Madigas. Besides, Madiga is not a Tamil caste. Nannan belonged to the highest and prestigious clan of Vēḷir whose descendants are considered as the present day Vellalas. The present Madigas are leather workers. By to stretch of imagination the Madigas can be equated with the ancient Vēḷirs who gave their daughters in marriage to the Chera, Chola and Pandya kings. Because Madigas settled later in Nannan's country who were leather workers, this legend gained credence. A Kannada proverb that is still prevalent in Pāram and its surroundings say *Nannena Patukku nari nayi tinnu hōyithu* 'that Nannan's hoard was eaten away by jackals and dogs'. Since common folks believed that Nannan issued leather currency, the story was invented to the effect that Nannan's coins which were made out of leather were eaten by jackals and dogs. This is only a folk tradition to which no reliance can be placed. But this proverb is based on the Sangam tradition which is two thousand years old. Akanānūṟu poem (258) specifically says that Nannan Utiyan had a well guarded *pāḷi* (a water-tank) which had a hoard of foreign gold coins which was gathered and protected by the very ancient Vēḷirs.

Another Akanānūṟu poem (173) calls the eḻil hills facing the sea as full of gold.

Nannan's Konkāṉam is called as possessing gold. It is said in Akanāṉūṟu (15) that the town of Pāḷi was well guarded. It is due to the fact that Nannaṉ had a huge hoard of gold because, I think, he had a favourable foreign trade balance with the Romans and Greeks. It is well known that the Roman gold currency was in circulation in Tamil Nadu in the Sangam period. Nannaṉ had hoarded the ancient treasure of gold coins inside the waters of the tank and guarded it with a standing army. Because Pāḷi was well guarded it was called in a Sangam poem as *Ceruppāḷi*, which meant the Pali town protected by army.

This information can be compared with the archaeological findings which have revealed hoards of Roman coins belonging to the period between the first century to fifth century A.D. near to ēḻil hills. Authentic references to the inflow of a huge amount of gold into Malabar kingdom for the sale of pepper are attested by foreign notices of India. Earlier I have mentioned about a reference in Akanāṉūṟu poem (345) about the white stockinged pure bred horses which came into Naṉṉaṉ's country by wind, obviously through ships driven by trade wind.

One other contemporary tradition which helps to reconstruct the history of Naṉṉaṉ of Sangam period is about the cruelty of Naṉṉaṉ. I met at Kasargod, Rama Naick Pundit who knew both Tulu and Kannada languages very well and to some extent Malayalam also. He knew the local legends on Naṉṉaṉ intimately. He wrote a drama which was enacted by high school students. The drama had a scene in which Nannan had the hands of the children who picked up and ate the fallen mangoes of his royal garden chopped off. In Sangam literature an incident is mentioned about Naṉṉaṉ's cruelty. A good variety of mango fruit of his royal garden fell in the river nearby and the fallen fruit was washed off on the river shore. I saw that a river flows near Pāram, the capital of Naṉṉaṉ's kingdom in my field study. A small girl picked it when she came to take a bath and ate it. When Naṉṉaṉ came to know that the fruit from the Royal garden had been eaten by a common girl, he ordered death sentence on her in spite of her parents offering eighty one elephants and the girls weight of gold. He was cursed by the very famous poet Paranar for this extreme cruelty. Hence was called 'Girl killer Naṉṉaṉ'. One of the descendants who was later a petty ruler noticed in Puranāṉūṟu was not embraced by the famous poet Kaḷāttalayār because he was the cruel Naṉṉaṉ's descendant. Such was the commotion that was created by Naṉṉaṉ's act of cruelty. The irony of Naṉṉaṉ's cruel killing lies in the fact that his name itself literally means a 'good man' but he proved to be a bad one.

In the commentary of Maduraikkāñci it is said that Naṉṉaṉ's birth day was celebrated with pomp and glory. One does not know how far it is true since he was denigrated by poets when he lived and after his death also by Sangam poets. In Kasargod and other places like Nileswaram he is considered as cruel king and he is said to have marrie

a dancing girl and is said to have been defeated by Ma urasarman. Contemporary field study can yield very good results sometimes to reconstruct the past history provided the material is used with scientific discrimination and the approach should be interdisciplinary.

There is a peculiar folk dance to propitiate folk dieties and more especially malignant dieties in North Malabar. Nannan's kingdom was called as 'Kōlattu Nāḍu'. This name is found as 'Kōlastri' (Kōlathiri) in the geneology of Mursika vamsa kingdom in Chandrotsavam. Kōlasthiri itself is a hybrid Tamil and Sanskrit term. The name arose because in North Malabar and South Canara countries there was in ancient times popular folk dance called 'Kōlam' depicting the life of folk hero-gods and goddesses and later the Hindu gods and in folk garb. The kōlam dance is now called Teyyāṭṭam, the dance depicting popular gods and goddesses. In these popular and seasonal dances the main thing is the folk mask and dress which is very impressive and remarkable. The only ancient reference to this kōlam folk dance is found in the commentary of Cilappatikāram.

It is significant and pertinent to note that the tradition of Nannan's infamous act in killing the girl for eating the mango is still prevalent in Sengam hills where his son migrated and ruled. There is a proverb *aṟunta māṅkani poruntiya ceṅkam*, whick carries the memory of the story of mango fruit which occurred in far off North Kerala in the first three centuries of the Christian era.

It is also significant that Nannan was also equally eulogized in the Sangam period. In Maduraikkāñci, a mention is made of the celebration of the birth day of great Nannan with great pomp by the people of his kingdom in comparison with great noise raised by the people of Madurai.

Probably Nannan was eulogized in Madurai due to the fact that he defeated the Chera king, an enemy of the Pandyas. It is also significant to note that in Kerala the ancient megalithic burial ground in large pots is called significantly enough as 'Nannangāḍi'. The name cannot be tranformation of Nankāḍu which meant Iḍukāḍu in Tamil, since it is pertinent to note that ancient burial grounds were associated with famous kings name or dynasty's name. In Kannada such ancient burial grounds are called 'Moriar Mana of Moriarangaḍi' associating the famous Mauriyas who conquered the Kannada country. It is well known that Sangam literature also mentions about the invasion of Mauryas. In Cheramangaḍi village near Kodungaloor there are burial grounds with stones shaped like umbrellas underneath which rock coffins with chambers are found. The burial ground is called by the name Seramanangadi. Patiṟṟupattu, a Sangam anthology of the poems in Chera kings mentions about the burial ground where the kings were interned in big pots underneath the *vanni* trees which signified the valour of the kings.

It is mentioned in Cilapatikāram that the kongaṇa and koṭuṅkaruṇṭa dancers pleased the Chera Emperor, Cheran

Cenguṭṭuvan (taṅkulakkōtiya takaicāla-ṇiyiṉaṉ) with their appropriate costumes. The land where the folk dances were held is still the North Malabar country called in Cilapatikāram as Koṅkaṇam and in the Sangam literature as Koṇkā-ṇam These dances are still performed in North Malabar, the Koṇkāṇa desa of Naṉṉán and also the Kodungarunadu of Cilapatikāram. These ancient dances are called Teyyāṭṭu in Malayalam and Bhuta dances in Kannada. It is significant to note that the koṅkāṇakkūttar and Kaṭuṅkarunāṭar (Karnatakas) were only the dancers who were from Koṅkāṇam of North Malabar and also Karnataka who danced the peculiar kōlam dances.

There is a peculiar folk dance performance enacted every year in Nileswaram. It is about a boy who was beheaded and who was later worshipped. There was a landlord Kurupp who had his servant by name Kannan who was tending the herd of his cattle. One day the man who herds the cattle picked up the fruit of the mango from the garden of Kurupp. But the fruit fell on the lap of the son-in-law of Kurupp. The landlord Kurupp got angry and ordered Kannan to be beheaded. Then immediately all the cattle died. After that event, the landlord Kurupp propitiated Kannan by enacting a dance of Kōlam. Here we can see a clear contemporary transformation of the story of the killing of the small girl by Naṉṉaṉ for eating the mango fruit two thousand years ago. Ibn Batuta tells of an incident in which the king of Kōlam killed his own son-in-law because he took and ate a mangoe fruit from his well. He killed by piercing his son-in-law's stomach with a sword. In this popular mango story the son-in-law himself is involved. Another folk legend in North Malabar says that a brahmin girl belonging to Teyakkāṭṭu Mana climbed the jack fruit tree and plucked a Jackfruit and she was killed by her uncle immediately. Then all kinds of disasters happened in the family. The dead girl who had become a goddess, was propitiated as 'Manayil Pothi' and 'Manayil Bhagavathy' as the goddess of the house and also a kōlam dance was performed as 'Kannikōlam' a virgin goddess ritual dance. All these traditional ritual dances, the so called devil dances move from the traditional story of the killing of a small girl who ate the mango fruit of Naṉṉaṉ's Royal garden and other traditional stories may be based on historical fact of Naṉṉaṉ's killing of the girl two thousand years ago of a mango fruit from his Royal garden.

There is a village called 'Udhuma' near Pāram which may be 'Udirma' in memory of the fallen mango fruit of Naṉṉaṉ's royal garden.

It is important to note that the memory of Naṉṉaṉ persists even today in North Malabar whereas the memories of the ancient Chera, Chola and Pandya kings are not heard of at all in their own ancient territories. An interdisciplinary study of folk memories and traditions by field study linked with history will yield valuable results even to know the past history.

I have attempted through my field study to reconstruct the past history of the king Naṉṉan. The hearsay legends, myths and other materials gathered from the common folk are utilized.

MALIYADIKKURICHI PANDYA CAVE-TEMPLE AND INSCRIPTIONS A GLIMPSE INTO RELIGIOUS HISTORY (8TH CENTURY A.D)

K.R.Srinivasan

Malaiyaḍikkuṟichi located deep in the Pāṇḍimaṇḍalam has a unique cave-temple[1] and an interesting foundation inscription in it, which was discovered and brought to light by me in 1957 (*ARE* 1959-60: 358).[2] It has proved to be the earliest Pandya lithic record so far known with the King named and regnal year indicated; and what is more, the Tamil inscription is inscribed in the Tamil-*grantha* script, as against all the early Pāṇḍya records known which are in *vaṭṭeḻuttu*, for instance the recently discovered Vaigai bed stone inscription of the 7th century of the 15th year of Arikēsari Māṟavarmaṉ (*EI* XXXII:4).

In essentials the plan and form of this cave-temple is of the *maṇḍapa* temple type of the Mahēndravarmaṉ style. It is excavated into the eastern face of one arm of the rock, overlooking a shallow sloping horse-shoe shaped valley, between the arms of the rock. Instead of giving a full architectural description, it will suffice here to highlight only its most interesting features.

The two facade pillars and the two extreme pilasters with top and basal *sadurams* and intervening octagonal *Kaṭṭu* are unique. They have on top of the basal *saduram* at the point of the emergence of *kaṭṭu*, a *padmabhanda* band of two seriate lotus petals, a feature not seen elsewhere. The lower *sadurams* are devoid of the usual circular lotus medallion reliefs. But the upper *sadurams* of the pillars on their front and lateral faces, and of the pilasters on their full lateral faces have varied medallion designs, some of them like those found in the other Pāṇḍya cave-temple pillars, circular lotus medallions with figure sculpture at the centre as small vignettes, or of the scroll (*koḍikkarukku*) type with *haṁsas*, *makaras* or mere sunflower motifs at the centre surrounded by a vegetal scroll of foliage and a ridge all round.[3] The front and hind faces of the pilasters have half medallions on their upper *sadurams*. These are highly individualistic features and the figure inside the medallions do not recall any deity of the Hindu pantheon. The figure in the torus of the flower on the front face of the northern pillar is a four-armed seated figure, holding a *cāmara* each in the upper two. While the lower right and left are in *abhaya* and *varada* poses. The corresponding one on the front face of the southern pillar is a youthful figure in the nude, two armed--seated on a couch and reclining by his right on a pillow and holding out something

by the left hand. There are two *cāmaras* above his head, one on either side, indicating his divinity or royalty.

The *potika* 'corbel' is more unique in that the two lateral arms of each over the pillars and single ones over the pilasters while having the usual curved profile exhibit not the usual roll moulding, *taraṅga*, but a series of four double-involute curves of decreasing size from base to the top, approximating the Chāḷukyan forms.

The rectangular east facing *maṇḍapa* ceiling, has beams running round all the edges inside, the two lateral ones entering into the larger main *uttira* over the facade pillars and pilasters.

The shrine front at the rear of the *maṇḍapa* has a moulded base or *adhiṣṭhāna* the members from bottom to top being the *upāna*, recessed and vertical *jagati* a circularly moulded torus or *vritta kumuda* (in contrast to the usually three facetted or *tripaṭṭa kumuda* of the early period elsewhere), recessed neck or *kaṇṭha* and the platform slab on top *paṭṭika*, and over it and unlike all the contemporary examples, has a *vedi* consisting of a recessed *gala*, with a second *paṭṭika* on top, on which the pilasters of the shrine wall are carved as set. The sill of the narrow shrine entrance is cut down into the top members of the *adhiṣṭhāna* to the level of the *jagati* which forms the still proper, but on either side below the *dvārapāla* niches, the *adhiṣṭhāna* is complete, again a peculiar feature (as in the Tirumalpuram cave-temple in same district). The half moon shaped *candra-sila* step on the floor in front is found covered by a limestone step.

The *dvārapālas*, one on either side of the shrine entrance, are totally chipped off and defaced, but the extant outlines show that they were two-armed ones in the usual poses, indicating an early date.

The two exposed areas of the *maṇḍapa* rear wall on either side of the shrine front had large relief sculputres, likewise defaced and erased. The one on the north in a wide niche over a moulded *adhiṣṭhāna* and framed by two pilasters which are extant, indicates by its faint outlines a four-armed divine rider on an elephant, while the two *cāmaras*, one on either side at the top corners, have been left intact. The corresponding niche on the south has lost both its base and the framing pilasters as also the sculpture totally and contains a later Pāṇḍyan inscription to be noticed in the sequel. The rider on the elephant and the corresponding but totally erased panel on the other side are strongly reminiscent of a similar grouping of a four armed Goddess riding a lion, with bows and arrows, and other weapons opposing a rider on an elephant holding sword and shield as in the Seṭṭipoḍavu cave at Samaṇarmalai near Madurai.

The shrine entrance is framed by a *makara tōraṇa* over-door forming the *mukavaṇai* or *mukapaṭṭi* with a Gajalakṣmī figure at the centre of the crest on top.[4] The *makaras* have *gaṇa* riders on them.

On top over the beam line of the architrave of the shrine front are exhibited the cut front sections of the linear cross beams as in the wood work arche-type exhibited

likewise in a few cases elsewhere, e.g. Pēchchipārai and Tirumalpuram in the same district.

The almost square shrine cell has smoothly finished floor ceilings and walls which are devoid of any sculpture; but the hind wall has the remains of plaster indicating the principal deity in worship to have been a wall painting as was the vogue in the almost contemporary and earlier Śaṅgam times (Srinivasan 1960 & 1964). Nor is there any bas relief sculpture of Somāskanda, Umāmaheśvara or other gods as in the later Pallava and Pāṇḍya cave temples of Hindu origin.[5]

There is also no rock-cut *āvuḍaiyār* with *liṅga* on the centre of the shrine floor as is characteristic of other Pāṇḍya cave-temples dedicated to Śiva, nor is there the pit cut into the floor on the north below the spout of the *āvudaiyār* or image pedestal to receive and collect the *abhiṣēka* water etc., as is characteristic of Pāṇḍyan cave-temples dedicated to Śiva and other Gods.[6] But there is a separate set of *liṅga* and *āvuḍaiyār* installed at the centre of the floor, since the temple is still in worship. The *āvuḍaiyār* square as in early examples, has all the mouldings as prescribed in the texts on Śilpa and *āgama*.

The old Tamil inscription in Tamil *grantha* script complete in three lines states that "the sacred stone temple *(kaltirukōyil)* was got made by Sāttaṉ Ēṟaṉ Sēvūrkiḻāṉ, alias Pāṇḍimaṅgalavadiarasaṉ in the 17th year after the accession to the throne of the king Māṟaṉ Sēndaṉ and in accordance with his bidding".[7]

The term *Karrirukkoyil (kaltiruk-kōyil)* appears to be more archaic than the name *Kaṟṟali*, or *tali*, that is more usual,[8] and its usage is significant as denoting a pioneer work of the kind, even as the famous Maṇḍagapaṭṭu cave-temple inscription in Sanskrit of Pallava Mahēndravarmaṉ I (A.D. 580-630) which proclaims the creation by the king of his first cave temple for the Trinity, without the employment of the traditional building materials brick, timber, metal and mortar. Our inscription, also in characters of the 7th century A.D. however, does not refer to the specific credal dedication -- Hindu or Jaina. The architectural and other features indicate the same dating leading to the identification of the Pāṇḍya king Māṟaṉ Sēndaṉ of the inscription with Sēndaṉ, the third in the Vēḷvikkuḍi Copper plate list, who ruled between c.A.D. 654 and 670, the 17th year of the present inscription coinciding with the last year of his reign.

II

An examination of the internal evidences in the cave-temple set forth above, particularly the vignette sculptures on the facade pillars, the lions facing in at the base of the shrine-front pilasters, traces of painted plaster on the hind wall of the shrine chamber in the absence of even a wall relief of the principal deity in that place, absence of rock-cut *āvuḍaiyār-liṅga* combination and the collecting pit on the floor of the *sanctum*, or of even an original channel as water outlet, the cutting down of the sill into the top tiers of the *adhiṣṭhāna*, the covering over of the *candrasila* step by a lime stone block, the defacement of the *maṇḍapa* wall sculptures and *dvarapalas*,

and the erasure of the plinth and framing pilasters of the southern niche, where the later Pāṇḍya inscription is subsequently engraved, and the extant remnants of the defaced sculptures and their outlines, would all indicate that the temple which was of Jaina dedication as originally excavated and completed was, with all the above modifications and erasures, converted into a Śiva temple, by the installation in the shrine of a *liṅga* on an *āvuḍaiyār* subsquently.

The later Pāṇḍya Tamil inscription in characters of the 12th century is of the 3rd regnal year of the Pāṇḍya Māṟavarmaṉ Tribhuvanacakravartikaḷ Śrī Vallabha Dēvar with the eulogy commencing with the words pūmagaḷ Jayamagaḷ *(ARE:* 1915: 607) records the gifts of land made according to Royal order to the God of the temple called Pinakkarukkum Mahadevar of Malaiyaḍikkuṟichi which was the southern hamlet of Śrī Parāntaka-Caturvēdimaṅgalam, a *brahmadēyam* village in Arināḍu. Among the boundary details specified are mentioned a channel called Vīrapāṇḍiyaṉ pilāṟu, and an irrigation tank called Mānābharaṇapēr-ēri.

The internal evidences in this 12th century inscription help us to fix within narrower limits the time of conversion of the temple into a Śiva temple. The inscription is dated in the 3rd year (A.D.1135) of Māṟavarmaṉ Śrī Vallabha who ascended the throne in A.D.1132. The conversion was certainly prior to this last limiting date. The name of the god Piṇakkarukkum Mahādēvar (Piṇakkuttīrtta Nāyaṉār) recalls the *Tiruviḷaiyāḍal Purāṇam* story of poet Iḍaikkāḍaṉār, a contemporary of Kapilar and predecessor of the Jaina grammarian, Amitasāgarar, of the 10th century, to whose work Amitasāgara refers in his ***Yāpparuṅgala virutti*** in the context of certain enunciations.[9]

According to that *purāṇam,* Śiva, the Lord of Madurai, got the name, Piṇakkuttīrttavar or Piṇakkaṟuttavar, since he settled or composed the disagreement or disputation *piṇakku* between Iḍaikkāḍaṉār and the Pāṇḍya king. The story is too well known to be recounted here. This would take the event of conversion of our cave-temple and the naming of the God so, to a period after Iḍaikkāḍaṉār, and also the more tangible 17th year of Māraṉ Sēndaṉ, corresponding to A.D.670. In the time bracket A.D.670 and 1135, the later limit may thus be brought to the 10th century and earlier. The names Parāntaka-Caturvēdimaṅgalam and the tenure cognomen *brahmadēyam* indicating the settlement of a large brāhmaṇa community of scholars versed in the four *Vedas* and the free gift of lands to them would lead us to infer the reconstitution and enlargement of the village (perhaps to the exclusion of the Jaina settlers and holdings) in the time of the early Pāṇḍya king Parāntaka who can possibly be Māṟaṉ Saḍaiyaṉ *alias* Parāntaka Neḍuñcaḍiyaṉ[10] who ruled between A.D.768 and 815. The absence of the usual formula *paḷḷiccandamum paḷam dēvadāṇam nīkki,* etc., in Śrī Vallabha's inscription, would mean that it was already a full *brahmadēya* with a *sabha* in authority, since the time of Parāntaka, and that Śrī Vallabha only added to its extent. The Vīra Pāṇḍya, after whom the *pilāṟu* 'channel' is named would be the same as Cōḻaṉtalai-koṇḍa Vīra Pāṇḍya, who was the immediate

successor, after A.D.920, of Māṟavarmaṉ Rājasiṁha II (A.D.905-920) Mānabharana after whom the *pēr-eri* (large irrigation tank) is named, too, was one of the Pāṇḍya princes who lived in the 10th century, and the title Mānabharanaṉ, occurring in the Ambāsamudram inscription of Saḍaiyaṉ Māraṉ is taken as the surname of the King Rājasiṁha himself (*SII* XIV Introductions). If the *Brahmadēyam* centered round the cave-temple, as it should have done, the Śaiva or Hindu conversion should have been earlier than the 10th century A.D. and earlier than A.D.815, the last year of Parāntaka.

Incidently, the name Piṇakkuṟukkum Mahādēvar of the Śivaliṅga installed, would recall the *piṇakkutīrta* incident as narrated in the *Tiruilaiyāḍal Purāṇam* in which the poet and grammarian, Iḍaikkāḍanār, figures as the person, who had a *piṇakku* with the Pāṇḍya king for slighting him, and which was composed and agreement brought about by the intervention of Lord Somāskanda, the presiding deity of Madurai. Iḍaikkāḍanār was a contemporary of Kapilar and predecessor of the Jaina grammarian Amitasāgarar of the 10th century, who refers to Iḍaikkāḍanār's work *Ucimuri*.The appellation *Piṇakkaṟukkum* is to be found also in the name of a person figuring in an inscription of Kō-Iḷaṅgō Muttaraiyar in the Uttamanātha (Uttamadani) temple in Kīranūr, Pudukkōṭṭai district (*IPS*, 237) of the late 9th and early 10th centuries. The naming of the installed Śivaliṅga as Piṇakkaṟukkum Mahādēvar, must therefore be after the similar appellation that the God of Madurai got in the context of the *piṇakkuttīrtta* episode of the *purāṇam* and such a name was in current use even in the late 9th century for the Śiva in some temples and many persons were named after such gods.

This evidence would thus further narrow down the date of the conversion of the temple to a period prior to the end of the 9th century A.D. and subsequent to the foundation date of the temple, that is A.D.670. This year incidentally was the last regnal year of Māraṉ Sēndaṉ who had ordered the excavation that was completed also for the inscription to be inscribed and who was succeeded in that year by Arikēsari Māravarmaṉ (A.D.670-700). Arikēsari was the same king in whose reign the Vaigai river bed stone inscription in *Vattelut-tu* has come to us recently. Though he is often identified with the Kūṉ Pāṇḍiyaṉ who was converted from Jainism to Śaivism by Saint Sambandar (according to the *Periyapurāṇam*), he may be identified from other evidences with Māravarmaṉ Rājasiṁha I (A.D. 730-68) (Venkataraman 1973:65-70).

The conversion of the Malaiyaḍikkuṟichi Jaina Cave-temple into the Piṇakkaṟakkum Mahādēva temple must, therefore, have been in the elan, that was the aftermath of the discomfiture of the Jainas in Madurai that was for a long time their stronghold and the royal conversion that is in the middle of the 8th century, a century or so after its completion. This is again echoed in the abrupt cessation of work in the Pēchchippārai jaina cave-temple, that was currently being excavated; for, judging from its style, architecture and sculpture this incomplete cave-temple would belong to the early 8th century.

The social and religious milieu

inaugurated by the advent of Sambandar to Madurai, and the king's conversion, in the last quarter of the 7th century, had indeed its effect on the curtailment of Jaina enterprise in rock-architecture in the Pāṇḍya country, in contrast to the hectic activity for over two centuries in that mode of temple making mostly for Śiva and a few other Gods of the Hindu pantheon. Out of nearly 60 rock-cut cave temples in the Pāṇḍyan area, only a very few, less than half a dozen, could be counted as still continuing to be Jaina, or having been originally Jaina. We may note here the solitary exception of the Arivar Kōvil in Sittaṉṉavāsal, in the more secure northern limits of the then Pāṇḍyan empire, which with its famous paintings of the 9th century, has survived till today, though long deserted even by the Jains after the 12th century or so.[11]

This movement of creating more and more cave-temples for Śiva and other gods of the Hindu sects appears to have been mainly in two forms. One was the conversion of pre-existing Jaina cave-temples as in the case of Malaiyaḍikkuṟichi, and the other the creation of new cave-temples at the sites, nay, on the very hills which were pre-eminently Jaina resorts, for centuries before, from the years B.C. often. These are the places with natural caverns *(amaṇpāḷi)* with polished beds dripline and Tamil-Brahmi and old Tamil inscriptions -- the *Panca Pāṇḍavarguhai* or *paḍukkai* as they are often called, and other Jaina antiquities. This was perhaps calculated to take advantage of the established popularity of the place as a *tīrtha* or religious resort and pilgrim centre and at the same time minimize, if not altogether nullify, the Jaina influence in that area. The best known among many such places would be Tirupparaṅkuṉṟam, Āṉaimalai, Piḷḷaiyārpaṭṭi etc., while in Anaimalai the cave-temple for Nṛsiṁha was excavated by a Pāṇḍya minister in A.D.770, in the time of Māraṉ Saḍaiyan *alias* Parāntaka Neḍuñcaḍaiyaṉ *(SII* XIV Introduction), the adjacent Lāḍaṉkōvil cave-temple was, according to its inscription *(SII* XIV: 98) a *pudukku* 'renovation' perhaps of an earlier Jain sanctuary in the late 8th or early 9th century. The main cave-temple on the northern side of the hill at Tirupparankunram, now celebrated as the Subrahmaṇya temple, with later additions of *maṇḍapas* and *gopura* appears to have been likewise remodelled into a combined temple for Śiva, Viṣṇu and Durgā, in the three *sanctum* cells cut respectively into either side walls and the rear wall of the rectangular rock-cut *maṇḍapa* additionally with sculptures of Ganesa and Subrahmaṇya on either side of the Durgā shrine, projected into the *maṇḍapa* by excavating on either side of it into the original rear wall, in the recesses. The relevant inscriptions in Tamil and Sanskrit attribute this to another Pāṇḍya minister and his wife, under the same Māṟaṉ Saḍaiyaṉ in A.D.773 *(SII* XIV: 3). The reading is *Sāttaṉ Gaṇavati tiruttuvittadu tirukkōyilum, Śrī taṭākamun itannuḷaṟa muḷḷadum.* The terms *tiruttuvittadu* and *i t a n u ḷ aṟa nuḷḷadum* are significant meaning 're-modelled or converted and that of whatever there is within'. The Umaiyāṇḍar cave temple on the southern side of the same hill was also of the same category, remodelled with a rough Ardhanārī sculpture on the rear wall of the *sanctum*, and later relief sculptures on the wall of the *maṇḍapa* in front and on either side of the rockface flanking the *maṇḍapa* facade.

The Pillaiyarpatti cave-temple of Tiruvingaichchura Mahādēvar, has an old Tamil label inscription which is not a foundation inscription, but merely the name of some person. There is the Jaina cavern with beds on the hill called Kunramēḍu, with another label inscription with the letters and writing in the laterally reverse order (*ARE* 1935-36, para 45). This would be another example of this category, the association furnishing evidence to the date of the cave-temple and its conversion. The Samaṇar Kuḍagu in Nārttamalai converted into a Viṣṇu cave-temple of Kariyamāṇikka Āḻvār or Padinenbhumi Viṇṇagaram, is flanked by a later Śiva-cave temple--the Paḻiyiḻi Iccuvaram excavated earlier and called so in the year of Nṛpatuṅga Pallava, of the cave cell type familiar in the Pāṇḍyan country, with another of the same type with rock-cut *liṅga* and *āvuḍaiyār*, under water in the tarn *(suṇai)* to the north of the Vijayālayacōḻīśvaram, structural temple built opposite the Samaṇar Kudagu and incidentally indicating though indirectly the date of its conversion. A similar underwater cave-cell with rock-cut *liṅga* and *āvuḍaiyār* has been excavated into the Navachchuṇai tarn, to the north of the Jaina natural cavern called Ēḻadippaṭṭam in Sittaṇṇavāsal. We have the classical example of the Veṭṭuvāṇkōvil, the *ratha like monolith of the Pāṇḍyas in addition to the Kaḻukāchala-mūrti* rock-cut cave temple, one on either side of the Jaina cavern and sculptures in Kaḻugumalai near Ettayapuram

Instances like these can be multiplied, but be it said that such a seemingly deliberate choice of the venue of rock-cut cave temples of the Hindu persuasion of the time of Pallava Mahēndra I, in well-known Jaina tīrthas or resorts of antiquity are to be seen in the earlier century in the Pallava country of Toṇḍaimaṇḍalam too, for example those in Māmaṇḍūr, Dalavanur, Siyamaṅgalam, Tiruchchīrāpalli (upper cave-temple) the last on the Pallava-Pāṇḍya border. Thus it would be a case of history repeating itself in the Pāṇḍya country, after the advent there of Saint Sambandar in the first half of the 8th century and the conversion of the Pāṇḍya, and getting reflected in the creations of religious architecture, art and sculpture contemporaneously and subsequently too, for as long as the momentum lasted.

NOTES

1. It is a small village adjoining Dārukāpura, in the Saṅkaraṇkōvil taluk of Tirunelvēli district, 7 miles from Saṅkaranayiṇārkōil, on a branch road taking off from Nagaram to Dārukāpura, at the 5th mile stone. The cave temple is reported as in Dārukāpura, by the Epigraphists who visited it in 1915-See Nos. 607 and 607 of *ARE*, 1916, p.60. The place is also found included in J.Dubreuil's unpublished list of cave temples. The two inscriptions copied in 1915 are late Pāṇḍya inscriptions of the 12th century. There is no description of the cave temple.

2. Not yet published in full by the Epigraphist. Because of the unusual location of the inscription and the heavy coat of white-wash covering it, it seems to have escaped the notice of the epigraphists and scholars till its ultimate discovery in 1957.

3. Medallion decorations of this type with variations are to be found in such Pāṇḍya cave-temples as the Varanachchimalai cave-temple in Tirumalapuram, and in the Pallava cave-temple (upper Rock-cut cave) on the hill at Tiruchchirāpaḷḷi, the southernmost Pallava Mahēndra example bordering on the then Pāṇḍya empire, and again in Siyamaṅgalam, on the Pallava border with the Gangas and Chāḷukyas indicating local affinities.

4. Such a *tōraṇa* is to be found in the Pāṇḍya cave temple in Tiṙukkōlakkuḍi, Rāmanāthapuram district.

5. Besides Pallava cave-temples in Māmallapuram, the Pāṇḍyan ones are those in Tirupparaṅkuṉṟam (main cave temple and Umaiyāṇḍar temple) and Pirānmalai and Tirumalai (Rāmanathapuram District), Malaikkoḻundīśvaran, Lāḍaṉ Kōvil, Āṉaimalai (Madurai District), Nṛsiṁha cave, Āṉaimalai etc.

6. Such collecting pits are not to be found in the Pallava cave-temples, but besides in the Pāṇḍya ones, they occur in some of the Cāḷukyan cave-temples and in the early structural temples on the Diang plateau in central Java (Indonesia) - See my article on Diang in *Kalaikkalanjiyam*, Madras, Vol.X, pp.288-90.

7. *Śrī Kōmāraṉ Sēndaṉ koṟṟamuṟṟit tiru virācciyañ cellā niṉṟatu patiṉeḻāka avaṉ paṇiyāl pāṇḍimaṅkala vati aracaṉ cēvūr-kiḻāṉ cāttaṉēraṉ ceyvitta kaṟṟiruk kōyil.*

8. The Āṉaimalai cave-temple inscription of Māraṉ Kāri has *k a ṟ ṟ a ḷ i* (*SII* XIV:2). The Malaiyaḍippaṭṭi cave-temple inscription (*IPS* 18) in Pudukkōṭṭai, Tiruchi, has *tali*, and the Nārttamalai cave-temple inscription (*IPS*: 19) Nṛpatuṅga Pallava's time has *Sri-koyil*. The term *kaṟṟaḷi (kal-taḷi)* came to be used for structural all-stone temples also subsequently.

9. *Oḻintaṉa Iḍaikkāḍaṉār pāḍiya vucimuriyut kaṇḍu alakiṭṭukkoḷka.*

10. The other Parāntaka Pāṇḍya who would come within our period was Parāntaka Vīranārāyaṇa who ruled between A.D.860 and 905, and it is unlikely that he was the author of the Caturvēdimaṅgalam, as other evidences would show.

11. Regarding the vicissitudes of the Sittaṉṉavāsal pāḷi and Rock-cut cave-temple, please see Srinivasan (1982 & 1984).

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THE OVERSEAS CAMPAIGNS OF RĀJARĀJA I

K. Indrapala

Ever since the decipherment and publication of the Cōḻa inscriptions containing what has been referred to as the *meykīrtti (praśasti)* of Rājarāja I, wherein a catalogue of his conquests is given, there has been a continuing interest in his overseas campaigns that for the first time brought about the acknowledgement of the rule of an Indian monarch in overseas territories. Greater interest, howerver, has been focused on the maritime expeditions of Rājarāja's son and successor Rājēndra I, no doubt on account of the wider range they covered, having been directed against territories in Southeast Asia. While for a long time the conventional approach was adopted, as a rule, in respect of the interpretation given to these expeditions, in recent years there has been renewed interest in these events and new interpretations have been proposed by some American scholars, followed by others in India. (Stein 1977, 1980; Spencer 1983; Hall 1980; Raghotham 1983). This paper attempts to study the overseas campaigns of Rājarāja in the light of these fresh approaches.

Although Rājarāja ascended the throne in A.D.985, some years must have elapsed before he was in a position to launch on invasions outside the Cōḻa kingdom. By his fourth regnal year he had reached the Kerala coast and was possibly ready to begin his overseas campaigns. Going by the catalogue of achievements given in his inscriptional eulogy *(meykīrtti)*, some time before A.D.988 Rājarāja claims to have achieved what has been couched in the dubious phrase *Kāṇṭalūr-c-cālai kalamaruttaruḷi.* This was originally rendered as "destroyed the fleet in the roadstead of Kāṇḍalūr" and was interpreted by the veteran historian of the Cōḻas, K.A.Nilakanta Sastri (1955; 189) as a naval victory off Kāṇḍalūrcālai. Though for a long time this interpreatation was not seriously contested, in recent years it has been asserted that the phrase does not refer to any naval triumph or martial exploit. Far from it, it was, according to Burton Stein (1980; 345 ff) and others, "a purely ideological victory, in which Rājarāja managed to secure for the Cōḻa court the services of a prestigious *sālai*, or Sanskrit school".

The first clear reference to an overseas campaign of Rājarāja occurs in the earliest copies of his *meykīrtti*, dated A.D.993, namely the conquest of Īḻa-maṇṭalam (Śrī Laṅkā) which brought Rājarāja 'fame in all the eight directions' *(SII* II Introduction). The exact date of the invasion of Sri Lanka is difficult to ascertain.

Towards the end of his reign, there is the claim in Rajaraja's *meykirtti* of the conquest of the 'twelve thousand ancient islands in the ocean' *(munnīr palantīvu pannīrāyiram) (SII* II introduction). The conventional interpretation identified these islands as the Maldives in the Indian Ocean, but this identification as well as the claim of such a conquest overseas are being questioned now (Spencer 1983: 35). There is no claim of any other overseas conquests by Rājarāja in his inscriptional eulogies.

The traditional approach to these claims has been to accept their validity and attribute to Rājarāja the defeats of an unknown enemy in a naval engagement off Kāndalūr-cālai, the conquest of the Maldive Islands. Nilakanta Sastri's views on these conquests were accepted by almost all South Indian historians for a very long time. In recent years, we have seen the rise of a new school of historians of the Cōla period, mainly American, who have brought to bear an interdisciplinary approach and new insights into their researches, resulting in a new, and at times provocative, interpretation of Cōla history. A leading scholar among them is no doubt Burton Stein (1980)who has made valuable contributions to the study of Cōla history during the last quarter of a century. Another scholar, George Spencer (1983), has made a special study of the overseas activities of the Cōlas and has adopted the position that "much of the epigraphical evidence that historians have cited to demonstrate professional military--and especially naval--organization during Rājarāja's reign must be set aside as unconvincing".

That we need to have a second look at the early interpretations, which are now more than fifty years old, is not to be denied. The invasions and conquests of ancient Indian rulers were interpreted earlier largely on the basis of what has been termed Eurocentric concepts of imperialism. In other words, the early historians tried to comprehend the conquests in terms of well known European models and this has been the traditional interpretation. The recent trends among the serious historians of the Cōla period show a fresh look being taken at the sources. These historians have raised problems about the interpretation of the accounts of political behaviour as given in the epigraphic sources and chronicles. In the words of Spencer (1983; 4),

> "Such records often are not what they seem; they may say one thing, but signify something else. Stated motives may not be the real ones. On rather, they constitute idealized, and therefore incomplete, versions of events. The sources not only have to be studied, but also interpreted, even *decoded*, because statements about kings and other heroes are couched in a language at once poetic and metaphoric, resonant with multiple meanings and especially religious implications--as for example,... when the invasion of Sri Lanka by Rāja rāja I is likened to the exploits of the epic hero Rāma..."

Spencer (1976) chooses to describe the political behaviour of the Cōla monarchs, especially in respect of Sri Lanka, as the politics of plunder.

Burton Stein (1977) too has attributed predatory motives to the wars of the Cōlas (1977). He argues that

> "As in most parts of medieval India, warfare was predatory in South India; the objectives

were not territorial, but the seizure of treasure. Cōḷa armies waging such wars north and west of the Tamil plain as well as in Ceylon were combinations of the core forces of the Cōḷa and allied locality forces intent upon sharing the prizes of war or the defense of their own territories from other predators".

Such interpretations are no doubt in sharp contrast with the traditional view in which the Cōḷa rulers were seen as European-style emperors annexing territory to their kingdom in a bid to build up a large territorial empire. In his provocative study of the overseas invasions of the Cōḷas, especially those of Rājēndra I, Spencer has worked on the hypothesis that these invasions constituted "a type of compulsive behaviour dictated by the urgent needs of statecraft, especially but not exclusively its economic needs". These needs, as listed by him, were:

> "to reaffirm the hero-credentials of kings and princes; to provide potentially restless vassals and their troops with profitable employment in distant places; and to secure access to what E.N. Eisenstadt has called 'free-floating resources', such as jewels and other valuables which were not firmly embedded in local communities, to place at the disposal of the court".

However, in respect of Sri Lanka, despite his preference for the use of the phrase 'politics of plunder' to describe Cōḷa behaviour, Spencer (1983; 31) is willing to concede that apart from plunder there were other political motives.

While these recent attempts at a fresh interpretation of Cōḷa history should be welcomed for opening up new areas of enquiry and speculation, it is the purpose of this paper to examine these theories and see whether their application to the overseas campaigns of Rājarāja is acceptable.

Stein and Spencer seek an explanation to the frequent wars waged by the Cōḷa rulers in the structural characteristics of the Cōḷa political system. It is here that Stein's theory of segmentary states comes into prominence. Stein (1980: 9) sees the Cōḷa political system as a segmentary state where "Territorial sovereignty is recognised but limited and essentially relative, forming a series of zones in which authority is most absolute near the centre and increasingly restricted towards the periphery, often shading off into a ritual hegemony". In such a set-up, the Cōḷa ruler at the centre did not wage wars with a centralised army for territorial annexation, but combinations of his forces from the central segment and forces from the other segments launched on military campaigns against neighbours either to seize treasure and share it or to defend their segments from other predators.

In the light of the foregoing discussion, we have to seek answers to two main problems relating to the subject of this paper, the overseas campaigns of Rājarāja. The first is whether Rājarāja conquered and annexed the islands of the Maldives and Sri Lanka. The second is whether these campaigns were motivated only by predatory considerations.

As we have noted above, the epigraphic sources refer only to two

overseas conquests of Rajaraja. Of these, the conquest of Sri Lanka is so well attested by the Sri Lankan chronicles and the Cōḻa inscriptions in Sri Lanka that we need not labour the point (Indrapala 1978). Of course, the whole island was not conquered, only the most important centre of political authority in the north of the island came under Cōḻa suzerainty.

As for the conquest of 'the twelve thousand ancient islands in the ocean', Spencer (1983:26) considers as doubtful both the claim as well as the identification of the islands with the Maldives. Nilakanta Sastri (1955: 183) had identified the islands with the Maldives and had unquestionably accepted Rājarāja's claim of conquering the islands. He quotes sources that refer to the King of the Maldives assuming the style of King of the Twelve Thousand Islands (Sastri 1955: 192). The identification of the 'twelve thousand ancient islands' with the Maldives should not pose a serious problem. Quite apart from the reference to twelve thousand islands, a reference that seems to be associated with the Maldives, the crucial word in the inscriptional phrase is *paḻantīvu* 'ancient islands', the Tamil form of the name Mahaladipa, from which is derived the name Maladiv (Maldives) (Maloney 1980: 137, 422). The name Palantivu occurs at least once in the Sri Lankan Pāli chronicles.

If Rājarāja's forces were in a position to carry out a naval expedition against Sri Lanka and subjugate the most important part of it, there is no reason to doubt Rājarāja's claim of a naval expedition to the Maldives. A look into the history of these islands will show that there were very close cultural and economic relations between the Maldives on the one hand and Kerala and Sri Lanka on the other (Maloney 1980: 192). Politically the islands, with a small population, were not in any way strong and a minor Cōḻa expedition either from Kerala or from Sri Lanka would have achieved the desired objective, without much opposition.

There is no reason why Rājarāja should claim the conquest of such a politically insignificant group of islands towards the end of his reign, unless he had actually sent an expedition there. It was certainly not one of those conquests that a monarch would have been anxious to claim for reasons of prestige. As we shall see later, the expedition to the Maldives was probably related to events in Sri Lanka and to the trade of the Indian Ocean, rather than motivated by territorial expansion. Whether the Maldives and Sri Lanka were annexed to the Cōḻa 'empire' is a question that will be taken up in the discussion of the second problem.

With regard to the second problem, we find that the new school of historians are emphatic that the overseas campaigns of Rājarāja and his successors had the main motive of plunder, while the traditional interpretations have hailed them as having been motivated by imperial or territorial expansion. The traditional historians, as noted earlier, were bound by Eurocentric views and to theories which European scholars had developed to explain Indian society.

The ideas about *empire, emperor* and *imperial expansion* that traditional historians had adopted in their writings on Indian history, especially in the twenties, thirties and forties, at the height of the nationalist movement, are no doubt adopted from European

models. That Nilakanta Sastri (1955: 194) had such a European model in his mind is obvious when he states that Rajaraja had 'an extensive empire comprising the whole of the modern Madras and Āndhra and parts of Mysore and the island of Ceylon' and that its 'administration had been carefully organized and a fairly powerful bureaucracy brought into existence'. Stein and others are right in questioning the validity of such conclusions, for these reflect the failure to analyse Indian political institutions on the basis of the systems evolved within the Indian tradition. There is a need to understand the true nature of 'the political society of the Indian subcontinent and its borderlands where concepts of relationships between political systems were very different from those of the contemporary west' (Embree 1977). While rejecting the traditional Eurocentric interpretation, Stein and others have adopted models from the tribal system of Africa, thus again leaving room for the criticism that the Indian political system is not being seen from the inside. The following criticism of Bernard Cohn (1977: 97) appears to be valid:

> ".... to study the Indian political order in the pre-British period as if it consisted of African lineages or segmentary states without reference to the sets of meanings people attached to 'political relations', without reference to the theory which lay behind the state systems would seem to leave out what was the more vital and more important part of the political order".

While, in fairness to Stein, it may be stated that his segmentary state theory seems to come closest to the medieval political system of South India, we should try to understand that system only on the basis of the theory behind it. And that is possible only through a thorough analysis of the epigraphic and literary sources that we have. Till then the segmentary state can at best be a tentative model.

To understand the factors behind the Cōla invasions of Sri Lanka and the subsequent rule established in that island, we must analyse the political and economic relations that existed among the kingdoms of South India and Sri Lanka in the two or three centuries preceding these invasions.

The invasion of Sri Lanka by Tamil princes from South India was not a new phenomenon of the Cola period. The Sri Lankan chronicles record such invasions from pre-Christian times and on many occasions these invasions resulted in the conquest of Anurādhapura and short periods of rule there by the invaders. But until the rise of the Pallavas, these invasions were not launched by kings of any of the Tamil kingdoms nor did they result in the recognition of the suzerainty of any South Indian king there. The successful invader usurped power at Anurādhapura and ruled there until he was ousted from the throne. There is no evidence of any South Indian ruler having been behind any of these invasions. But with the emergence of strong dynasties in the seventh century, especially in the Toṇḍaimaṇḍalam region, a new pattern of political relations could be seen to emerge.

When the Pallavas, the Pāṇḍyas and the Chāḷukyas began to clash with each other as the major dynasties of the region, a pattern of

friendly alliances centring round each of these dynasties and involving the minor dynasties of the region could be seen to emerge. Those minor ones allied to a major dynasty felt it obligatory to help their major ally in the latter's wars, while the major dynasty was in turn obliged to help the minor allies against their enemies. The beginnings of the involvement of the Sinhala dynasty of Sri Lanka in the South Indian system of alliances could be seen in the seventh century when the Sinhala king Māṉavarmaṉ and the Pallava Narsimhavarmaṉ were allies. It naturally meant that the Sinhala ruler had to consider the Pāṇḍya as his enemy. And this was exactly the position in the 9th century, and possibly in the 8th century A.D. too. The Sinhalas were among the allies of the Pallavas when they fought the Pāṇḍya Śrī Māra Śrī Vallabha. After defeating the Pallavas, Śrī Māra turned against Sri Lanka and inflicted a crushing defeat on the Sinhalas at Anurādhapura. Around A.D.880, the Pāṇḍyas clashed again with the Pallavas and on this occasion, too, it is possible that the Sinhalas supported the Pallavas. With this encounter, the power of both the Pāṇḍyas and the Pallavas declined, and the Cōḻas began to emerge as the most powerful dynasty in Tamil Nadu. At this point we see a change in the traditional alliances, for from the beginning of the tenth century, the Sinhalas are allied with the Pandyas, an alliance that lasted till the fall of the Cōḻas. It is in this change that we have to trace the beginnings of the hostility between the Cōḻas and the Sinhalas.

From the time of Āditya I, we find the Cōḻas counting the Sinhala dynasty among its defeated enemies. Parāntaka I sent an expedition to the island and claimed victory, using the title *Maturaiyum Īḻamum koṇṭa* (Conqueror of Madurai and Ilam). There was another invasion of the island in the reign of Parāntaka II. Finally, in the time of Rājarāja, some time before A.D.993, a successful invasion resulted in the conquest of Anurādhapura.

The inscriptions of Āditya, Parāntaka and Rājarāja give no reasons for the invasions of Sri Lanka, although the records of the reign of Rājēndra I give some clue regarding the motives behind his invasion. It is clear, however, that from the time of Āditya, there was longstanding enmity between the Cōḻas and the Sinhalas. A study of the Sri Lankan chronicles shows that the reason for this was an anti-Cōḻa alliance among the southern dynasties, namely the Cēras, Pāṇḍyas and the Sinhalas. The Cōḻas considered them as a troublesome gang of three and in fact referred to them collectively as the 'three southerners' *(Teṉṉavar mūvar)*. The Cōḻa attempt to subjugate them is understandable in the light of the ideal of kingship to which they subscribed and which they developed under Rājarāja.

The subjugation of the recalcitrant dynasties of the South was necessary in terms of the Cōḻa ideal of kingship, as reflected in the inscriptions. Rājarāja considered himself as the Lord of Wealth and of Land and, as S.Pathmanathan (1981:93-112) has shown in a recent study, there was on his part the pretension to be a Universal Ruler. Though not articulated in the inscriptions, his predecessors also possibly had such

an ideal which is, of course, nothing new to Indian political theory. In the pursuit of such an ideal, the Cōḷas had to invade their neighbouring territories and establish their supremacy over the dynasties in those territories.

Associated with this aim were, no doubt, what Spencer describes as the 'urgent needs of statecraft'. His argument that there was the need 'to re-affirm the hero- credentials of kings and princes' is acceptable. Pathmanathan (1981:93-112) too, accepts this when he says that 'the Cōḷa rulers had to convince the various kings, chieftains and status-groups over which they had attained a position of overlordship of their military prowess and superiority in order to keep them in a position of subordinate alliance.'

But we need not attribute motives of either grandiose imperial conquest or mere plunder for these invasions. That the invasions did result in the acknowledgement of Cōḷa suzerainty over a large area, including much of Sri Lanka, is undeniable. Such a situation, however, was not equivalent to an imperial organization in the Western sense. Similarly, there was plunder in the course of the invasions, as has been the case during military campaigns throughout the ages in all countries. But that is not to say that plunder was the main motive.

If plunder was the motive, we cannot explain Cōḷa behaviour after the invasions. Once the plundering was over, what were they doing in Sri Lanka for years trying to maintain a foothold there? An analysis of Cōḷa activities in Sri Lanka (as well as in Kerala and the Pāṇḍya kingdom) shows that they were neither annexing it as part of their so-called well-knit empire nor sacking it with the motive of plunder.

In the Indian experience, when a powerful dynasty defeated the rulers of small neighbouring kingdoms, these remained in the hands of the defeated rulers, retaining their autonomy after acknowledging the suzerainty of the victorious monarch. But if a defeated ruler proved to be recalcitrant, the tendency was to install a submissive member of his dynasty as the new ruler. In the case of the Cōḷas, too, we find this practice being adopted in the early years. But when the southern dynasties were repeatedly defying the authority of the Cōḷas, the system was modified to allow for members of the Cōḷa dynasty to rule in those kingdoms as the legitimate successors of the traditional dynasties by adopting hybrid dynastic names, such as Cōḷa-Kēraḷa, Cōḷa-Pāṇḍya and Cōḷa-Laṅkeśvara, as well as the relevant consecration names. But that was after the reign of Rājarāja I. Such a political system was much less than a western type empire, but would appear to be more than a system of segmentary states.

Coming to the economic motive of plunder, it is hard to accept that Rājarāja's main motive in invading Sri Lanka was to loot the palace and the Buddhist monasteries at Anurādhapura of their wealth. While it need not be denied that the Cōḷa armies looted what was left of the royal treasure (there was not much left according to the Chronicles) and the monasteries (which being Theravada institutions were in any case not repositories of material

wealth like the Hindu temples, although they held enormous property in land), the fact that the Cōḷa armies stayed on in Sri Lanka would mean that there were other overriding motives than plunder.

Aside the political motive already discussed, there were possibly other economic motives which necessitated keeping Sri Lanka within the sphere of Cōḷa influence. In view of the important role tthat South Indian trading communities played in the commerce of the Indian Ocean at this time, it is worthwhile looking for any commercial motives behind Cōḷa behaviour towards the end of the 10th century A.D.

The 10th, 11th and 12th centuries A.D. were a period when powerful mercantile communities of South India were active in Sri Lanka, Southeast Asia and the ports of China. We do not have any evidence regarding the relations that might have existed between the rulers and these communities, or of any support or protection the latter received from the rulers. There was, of course, no question of these communities being associated with the rulers in any imperial expansion, as in the case of the latter-day European colonialism. But on the other hand, some interest on the part of the Cōḷa rulers in the profitable overseas trade that was going on at that time cannot be ruled out. Spencer himself, with all his emphasis on the plunder motive, is inclined to concede commercial motives to Rājarāja's support of Buddhist *vihāras* at Nāgapaṭṭiṇam. We also find that the Cōḷa rulers, like the monarchs of the Southeast Asian kingdoms interested in the China trade, sent missions to the Chinese emperor. Obviously the motive was not political. Possibly it was commercial. As the Cōḷa rulers themselves did not directly engage in trade, their missions were in all probability on behalf of the Tamil traders who were engaged in the China trade and from which trade the Cōḷa rulers stood to gain. The Sri Lanka chronicle refers to information given by a trader to Rājarāja regarding the political confusion at Anurādhapura, thus prompting him to undertake the expedition to Sri Lanka. If there is any truth in this, it would imply some connection between the Cōḷa ruler and the traders but our evidence is meagre. We do, however, see that in the wake of the Cōḷa conquest of the island, there was an increase of South Indian trading activities.

Another aspect that needs to be taken into consideration in this discussion is the Indian Ocean trade at this time. After the 8th century A.D., the Muslim Arabs and the Persians expanded their commercial activities eastwards and were, by the time of the accession of Rājarāja, on the point of controlling the Indian Ocean trade. During the same period, the Chinese too had developed a greater interest in the trade of Southeast Asia and South Asia and were frequenting the ports of South India, while some of the rulers of these regions, including the Cōḷas, reciprocated by sending missions to the Chinese court. It is now well known that the Chinese had regular trade with Tamil Nadu and that the Tamil traders, too, had established themselves in some Chinese ports at this time. In a recent study, another American scholar Kenneth Hall (1980,p.163) remarks that the "Cōḷa ports were recognized as 'first class' trade partners of China".

Despite the tremendous development of the Arab trade, however, we do not have evidence of Arab domination of the Indian Ocean trade in the 11th century A.D., as we do for the period after the 12th century. In Sri Lanka not much of evidence is forthcoming regarding the Arab trade in the 11th century and the situation is not very different in the Maldives either, where after the 12th century there is a total take-over by the Arabs. The question arises as to why the Arabs, who had begun to push eastwards in the ninth and tenth centuries, had to wait till the 13th century to establish themselves on the Kerala and Pāṇḍya coasts and in Sri Lanka and the Maldive Islands. Without going into great details of the commercial situation at this time, the only answer that seems possible is that the central part of the Indian Ocean, with its chief ports in the above-mentioned areas, were controlled by some others whom they found too powerful to oust. And we know that the commercial forces in those regions (we do not know about the Maldives) were the powerful South Indian mercantile communities who go out of the scene only in the 13th century when the Arabs become dominant. This is not to imply European style rivalry but there must have been competition even among the medieval Asian trading communities.

Did the Cōḻa rulers provide any backing to these traders? An answer to this question will help to place in proper perspective Rājarāja's invasion of SriLanka and the Maldives. That the Cōḻas were not interested in the lucrative maritime trade of the South Indian mercantile communities is hard to accept. Kenneth Hall (1980: 163, 165, 169, 175, 191) repeatedly hints at a strong Cōḻa interest in the trade when he says: "Port cesses...... seemed to have increased royal interest in promoting this trade", "Rājarāja was in some way interested in the (China) trade route", "Cōḻa kings saw benefits to be derived from a positive stance toward commerce", and "not only soldiers and temples benefited from the prosperous royal expedition, but also other sectors of society, including merchants".

Control of the Kerala coast, Sri Lanka and the Maldives was necessary, if the South Indian mercantile communities were to dominate and get maximum profits from the trade with China and Southeast Asia. If Rājarāja and his successors were interested in the benefits of this trade and in protecting the traders against the inroads of the Arabs, one could naturally expect them to prevent control of the ports by the Islamic rivals. It is, therefore, possible that the invasion of Sri Lanka, and more so that of the Maldives, had commercial motives too.

The relations between Sri Lanka and the Maldives have been very close during the early period, so much so that not only a dialect of Sinhala but also Buddhism was well established in those islands. When, in the time of Rājarāja, Anurādhapura was sacked and the Sinhala ruler had to flee to the southern part of the island, it is possible that the latter was in contact with the ruler of the Maldives and was promoting activities that affected the South Indian traders. The Arabs were anxious to gain a foothold there, and the Maldivian ruler might have adopted a policy more favourable to the Arabs. This perhaps prompted the attack on the

Maldive Islands towards the end of Rajaraja's reign. The attack fits the need to control the Maldives for the security of Sri Lanka as well as for the protection of the South Indian trade. Once the Colas were out of the scene, the Arabs were firmly in control of the Maldives and Buddhism was supplanted by Islam. And in Sri Lanka, too, the Muslims controlled the external trade after the 12th century ousting the earlier South Indian communities.

In the light of these considerations, it appears that Rājarāja's possible naval engagements off the Kerala coast, and the attack on the Maldives as well as the conquest of Sri Lanka had commercial motives quite apart from the political objectives of living up to the ideals of a hero-king and subjugating recalcitrant rulers. Spencer (1983: 1122) himself concedes that plunder need not have been the motive for all the invasions when he says that "some campaigns were indeed aimed at expanding territorial hegemony, in the sense of subduing recalcitrant chiefs and reducing them to allied or tributory status". The repeated engagements in the Pāndyan kingdom and in Sri Lanka and the attack on the Maldives were motivated by this reason, although the initial campaigns in the first two places did result in plunder.

Finally, we come to the question of annexation. So far no evidence of Cōḻa influence has come up in the Maldives and it is most unlikely that there was any Cōḻa rule imposed on those islands. The invasion must have had a limited purpose and it cannot be claimed that the Maldives were conquered and annexed to the Cola territory. On the other hand, the situation in Sri Lanka was quite different. The Sinhala ruler of Anurādhapura had been in league with the Pāṇḍya and had given the latter refuge after the defeat of their combined forces around A.D. 915. The Pāṇḍya had also entrusted his regalia to the Sinhala ruler. Some time in the middle of the 10th century A.D there was another Cōḻa invasion of Sri Lanka. A few years later, around A.D. 965, the Pāṇḍya and Sinhala forces made a combined bid to resist Cōḻa aggression (Sastri 1955: 154). After this, it was left to Rājarāja to attempt the subjugation of the Pāṇḍya and Sinhala dynasties. Thus we see that both the Pāṇḍyas and the Sinhalas proved to be difficult to subjugate and the constant support provided by the Sinhalas to the Pāṇḍyas made it necessary for the Cōḻas to control Sri Lanka if they were to maintain an effective hold on the Pāṇḍya kingdom. Even applying Stein's theory, Sri Lanka would have been important as a peripheral zone of Cōḻa influence.

Rājarāja's invasion did not result in the conquest of the whole island. But the most important political centre, Anuradhapura, was conquered. As the Sinhala ruler had fled to the southern part of the island, it is not known what arrangements were made to administer the region. It is possible that it was left under the care of a prince of the Sinhala dynasty or a Cōḻa commander, for in the 29th year of Rājarāja (A.D.1014) we find that certain villages in Sri Lanka had been granted by the Cōḻa monarch to the temple at Tanjavur (Sastri 1955:172). An inscription of Rājarāja has also been discovered in Sri Lanka. This record refers to a Siva temple named after Rājarāja (Iravikula-māṇikka-īśvaram) which appears to have been built there some time before the

20th year of the monarch (Indrapala: 1971). It is, therefore, clear that the northern part of the island had acknowledged Cōḷa suzerainty as a consequence of the invasion of Rajaraja. Since the Sinhala ruler had escaped to the south, some arrangements must have been made to retain Cōḷa control of the north. In the years after Rājarāja we know the nature of the arrangements. In the face of Sinhala resistance for more than three quarter of a century, the Cōḷas kept control of the north. While it may not be described as imperial control and annexation to the empire, it was more than an acknowledgement of Cōḷa sovereignty. The use of Cōḷa territorial names, the employment of Cōḷa officials, the building of Śaiva temples named after Cōḷa royalty, the establishment of *brahmadēyas* and the grant of produce from villages in the island to the temple at the Cōḷa capital clearly indicate a very real Cola presence in Sri Lanka.

The overseas campaigns of Rājarāja were, therefore, an inevitable follow-up of the relations that had developed among the South Indian kingdoms and Sri Lanka in the previous centuries as well as the consequence of Rājarāja's endeavours to establish his hero-credentials. There is also the strong possibility that commercial motives too played a part in these campaigns.

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A MEDIEVAL URBAN CENTRE OF TAMIL NADU BEYOND THE IMPERIAL FRONTIERS

Aroma G.Sam

Urban centres play a crucial role in the history of nations on account of the economic, political, cultural and militant activities in them. The cities situated in strategic spots have natural linkages with the near and far off hinterland from where they draw human and material resources. They offer natural facilities for the growth of defence, commerce and civilization. Senji is one of such urban centres of Tamil Nadu which developed and flourished during the medieval period.

Though people are attracted to a place quite unconsciously and naturally in the beginning, the conscious planning and development of the city for definite purposes, soon begin to play an important part in the growth of such cities. Senji was a conscious and deliberate creation of the Vijayanagar Nayaks, Bijapur Sultans, Marathas, and the French and British Imperialists. Whatever the antiquity of this city remains, they touch upon several points of the details of Urban planning of a militant city which are very resourceful for a proper understanding of the principles people had in view of the development of urbanisation.

In the north western corner of the district of South Arcot extending for about eighteen or twenty kilometres in the centre of the Senji taluk, are several hills whose summits are very jagged, each consisting of a central stratified rock covered with huge rounded boulders devoid of all vegetation, the mountains crowding about in wild confusion. The fortifications of Senji stand on three of these hills which form the angular points of a rush equilateral triangle and the whole place is enclosed by a huge rampart. The walls which are even now in a state of good condition are built of strong blocks of granite. The three hills are well fortified on everyside by battlemented stone walls equipped with loopholes for the use of gun & musketry. The lower part between the hills was pierced by two entrances, on the north by the Arcot or Vellore gate and another on the east known as the 'Pondicherry Gate.' The hills served as the citadels of the entire fort area.

Temple is the nucleus of ancient cities. The temple of

the Goddess Kamalakshiamman is the oldest spot in Senji. Probably older than the fort. Goddess who is worshipped as Senjiamman is believed to have given the name Senji to the fort and town. Mosques, temples and Pantheons jostle one another in picturesque confusion at the base of the hill.

The strongest part of citadel, the Rajagiri, must have been constructed by the Vijayanagar Nayaks who enjoyed peaceful rule for a number of years and who were very likely largely responsible for the various improvements in the defences of the fort, though subsequent conquerers of the place like the Marathas and French added to its strength in several aspects. The most remarkable ruins of the fort found are the Kalyanamahal, the granaries, the *mantapams* and the French batteries. The temple is at the base of the hill, some of the sculptures and the remains there in are valuable even from an architectural point of view.

There were two separate towns known as Shiva Senji and Vishnu Senji, the latter being regarded as a popular and flourishing resort to an immense number of pilgrims. The breath of the town was trifling, having only one street of shops with houses and gardens of the inhabitants surrounding them. The tanks were numerous.

During the reign of Ananda Konk, 1200 A.D. city planning was attempted in Senji. He dug-out tanks and built rest houses by the sides of the roads leading to Tiruchirapalli and Thanjavur. With the rise of Vijayanagar empire about the close of 12th Century Senji like the other principalities of Madurai and Thanjavur was brought under its sovereignty.

Father Pimenta of Portugal visited Senji in 1597 A.D. When Krishnappa Nayak was ruling it. Probably Senji was in the peak of its glory when he visited and was one of the most impregnable and strongest forts in the whole of India and extended as far as the present village of Melacheri about three to four kilometres to the west of the present fort. According to Pimenta, Senji was the greatest city he had ever seen in India and bigger than any in Portugal except Lisbon.

Krishnappa Nayak allowed inhabitants of Senji to select their own building site and a piece of land was assigned to each in the outskirts of the city for agricultural purposes. Many buildings were under construction when Pimenta visited the place. The revenue administration of Senji was so excelled and systematic. The sources of revenue were fixed and reduced to a regular form. The picture given from the narrative of Pimenta reveals the splendour of the anicent city, its power and influence and also it throws some light on urban socio-economic culture of foregone years of Tamil Nadu.

The Bijapur Sultans conquered Senji in 1648. Islam flourished then. The treasures, gems, jewels

and other valuable properties were taken from Senji and added to the imperial treasury. Mosques were erected in the city which was full of temples previously.

Senji assumed a new enhanced strategic importance under Shivaji who ruled over it since 1677. Shivaji applied all the energy of his mind and all resources of his dominions to the fortifications of all the principal places. He constructed new ramparts around Senji, dug ditches, created towers and executed all the works with perfection. Again Senji came under Mughals in 1698.

The batteries between Pondicherry and Arcot Gates were erected by the french during their occupation of Senji in the fifties of the 18th century i.e., 1751 to 1761. The place had then for long been the scene of Malariad virulent scourge. Governor Pigot of Madras wrote to the French in 1760, that the prisoners could be sent to Senji who would suffer there a lingering death. It became a shelter for thieves and a den for wild beasts. It remained an isolated spot dreaded by all and the fort and buildings became a prey to any one who coveted the valuable store of finely worked ornamental store.

Senji, once considered as the Troy of East fell into the hands of British in 1761. Ever since it came under British control, it lost its urban significance. Demolition of Senji forts was ordered by the then Collector of South Arcot in 1803 in view of its proximity to Pondicherry. The old gate-ways of the fort have been walled up, the new gaps in the walls made for carrying the road from Tindivanam to Thiruvannamalai. That became the entrance to the enclosed fort area.

Senji has been a pilgrim resort. The city is vulnerable for its antiguity and sanctity. It is still one of the principal places of worship in Tamil Nadu. Even though Senji is now a small town with the rural outlook, it presents a desolate scene of its ruins temples and graneries. It attracts a large number of visitors who wonder at the ponderous nature of its fortifications. It is a melancholy reflection for the economist, that what was once a scene of bustling animation and dazzling military pomp can boast at present of only a few humble inhabitants with a handful of peaceful agriculturists where once rulers sat in state and administered the affairs of the realm.

But the memory of one of the cities of antiquity and its leaders are preserved even to this day in every town and village of Tamil Nadu. The Raja Desinge of Senji, how he fought and fell are found as theme to many ballads and historic stories. One of the ancient urban centres of civilisation has thus become more and more a history of dissolution and delay.

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The Modi Records of the Marathas and their Historical Importance

J. R. Jayachandran

The Origin of the Modi script

The Yadhavas of Devagiri who claimed descent from the epic hero Krishna are also called Sevunas because they ruled over the Sevuna or Senua country, the region from Nasik to Devagiri. Bhillama (1187-1191) who had been a feudatory of Someswara IV, took advantage of the decline of the Chalukyas of Kalyani seized the territory as far as the Krishna, founded Devagiri and made it his capital in 1187.

Ramachandra or Ramadeva, son of Krishna and nephew of Mahadeva ruled the Yadhava kingdom from 1271 to 1309. Hemadri or Hemad Pant was the prime minister of Ramachandra. Hemadri was also the prime minister of his predecessor Mahadeva.

Hemadri was a versatile scholar. **Chatur Vargachintamani** of Hemadri is a voluminous work, in parts dealing with **Vrata** or religious fasting, **dhana** or gift, **tirtha** or pilgrimage, and **moksha** or solvation. A supplement to it gives an account of the deities, **Sradhas,** auspicious moments for performing religious ceremonies and expiatory rites. Hemadri also wrote commentaries on a medical work and an exposition of a Vaishanava doctrine. He devised a style of temple and domestic architecture named after him. **He also devised a way of writing the Nagari Script called MODI.**

There is also a mythological story about the introduction of the Modi script. Once a demon, a subject of Ravana passed through the Yadhava Kingdom. The demon wanted to take rest. So he took off his turban, placed it on the ground and went to sleep. Hemadri saw that gigantic turban and thinking it to be a couch, flung himself upon it and was soon asleep. On waking, the demon took his turban and put it on his head and went to Ceylon. When Hemadri awoke, he saw the change and tightened his grip on the turban. When the demon took off his turban again, he saw Hemadri and asked him how he came there. Hemadri prayed for mercy and the demon granted it. The demon also gave him some seeds of Indian jowari or Indian corn. The Modi script came from one of the seeds. From this story, we can guess that from Hemadri's time, the Modi began to be used in correspondence in Marathi.

The use of Modi script by the Marathas

The Modi script from the 13th century was used mainly for **account keeping and correspondence by the Marathas.** It was the medium used both in Maharashtra and in Tamil Nadu. The Modi script was also in use in all the places where the Marathas lived.

There are about 800 bundles of Modi manuscripts in the Saraswathi Mahal Library, Thanjavur. Out of which 600 bundles are yet to be deciphered. 150 to 200 bundles have been translated into Tamil and Marathi. They reveal the details of the culture of the Tamils and South Indian which prevailed during the Maratha rule.

The language was in use until the death of the last ruler, Shivaji (1855). Even afterwards the

British followed the same system for two decades (1870). It is said that the old revenue records of Thanjavur and some other districts are in the Modi script. Afterwards the British switched on to the local script and languages. The existing records cover the history of Thanjavur over a period of two centuries. Some of the bundles found in Saraswathi Mahal Library dates back to the days of Shaji, father of the great Shivaji. He was the Subhedar of the South.

Classification

The manuscripts can approximately be classified into **judicial, military, civil** and **financial, administrative** systems and other miscellaneous subjects like **festival, marriage, death** celebration in the **Royal Household** and so on. The records also contain information about salaries paid to various scholars, musicians, Vaidya, Hakims and European doctors (medical men). The Modi records have information regarding the expenditure of the Rajas covering a period of more than two centuries.

Judiciary

Accounts of judicial administration are found in the Modi records. The proceedings of the Nyaya Sabhas have been noted. Mudritha Sabha, Dharma Sabha and Nyayadeesha Sabha dealt with civil and criminal cases.

Military Administration

There are references to the military administration of the Marathas. The cadres of military officers right from the commander-in-chief to the ordinary sepoy have been mentioned in the Modi records. Marathi and Sanskrit words were used for military drills etc.

Pundits or Scholars

The names of many pundits or scholars have been mentioned in the Modi records. They also contain the information about emoluments and presents given to eminent men of letters.

Civil Administration

In this field we have reference to Bara Mahals and Uttara Karkanas.

Medicines

We come across even valuable medicines prepared with their recipes. The name of one such valuable medicine is **Maharaja Miruhankam.** Many valuable and efficacious medicines were prepared. There are references about the quality and quantity of the medicines. The medicines were prepared with very great care and attention. Medicines were prepared not only for the human beings, but also for animals like cattle, elephants, and so on.

Manuscripts and Books

We also find references about the purchase of thousands of manuscripts by Raja Serfoji and his works on subjects like literature, music, dance and so on.

The value of each and every book has been mentioned. Books and manuscripts were purchased from all parts of the country. There are references to the fact from where these works were purchased. There are accurate reports about the books imported from England. Those books were purchased from Rajah Serfoji's European friends. Books on gynaecology,surgical methods & allopathic medicines were also purchased. Several journals were purchased from Europe. Books on gymnastics and wrestling were also purchased.

The Modi records note that several perfumes were brought from other countries. Horses were imported from Arabia.

Education and Art

The Maratha kings built several choultries for providing food and shelter for the poor and the pilgrims. There are references about the expenditure on schools, salaries of teachers and stipends issued to the students. Vedic schools were attached to the temples. Non-Brahmins also were studying the Vedas in those schools. Food, shelter and clothing and even oil bath twice a week were provided to the students.

Several records reveal the expenses for giving salaries to dance masters (Nattuvanars) and stipends to pupils who learnt dancing. There are also references about musicians and persons who played on musical instruments. There was also the Rajah's personal orchestra.

Temples

The modi records speak of the endowments to temples given by the Maratha Rajahs. Some new temples were built. Many temples were renovated. Special grants were also given for the conduct of festivals in several temples. The Modi records also given a picture of the details of worship by the Rajas, their consorts and queens. Agraharams were endowed. A Mahamandapam was built as the extension of Sri Sankara Madam at Kumbakonam.

Social Life

Many details are found about the practices of the people and the Rajahs. References about the social functions and ceremonies are found in the records. Details about marriage celebrations, nuptials, naming the child, wearing the sacred thread and such other celebrations are found in the Modi Records. It also gives an information about the fasts and feasts of the Royal family and the common people. Expenses connected with those functions are given in detail. They had faith in Astrology. Even Chandrashtamam was seen. The Rajah gave Godhanam (gift of the cow) in the mornings. It is stated that Rajah Serfoji used to read with devotion (Parayanam) Saint Tirumoolar's **Tirumanthiram.** Once when he went out on tour to some place, he did not take the book with him. When he came to know that the sacred book was not with him, he sent a special messenger to the palace and got it for reading.

Printing Press

Mention has been made about the printing press. There was also a foundary to produce the types. The Names of books printed in the press are also found in the records.

Games and Sports

The Modi records reveal about the sporting activities of the Royal family. Tiger hunt and Cheeta hunt were very popular. **'Yuja Nama'** contains information about training the Cheeta. It also says about the medicines for ailments. The Marathas also trained the Falcons for hunting. The training methods of Falcons are found in the work **'Baaj Nama'**

Ship Building under the Maratha rule

There are many references to ship building in the Modi records, in a place called **SALUVANAYAKKANPATTINAM.** That place was also called as **SARABENDRA RAJAPURAM.** Timber was purchased from several places for ship-building. There was a port with light-house. There was a naval school in Saluvanayakkan Pattinam. There were serangs and sailors. There was a foundary which produced anchors, chains, nails etc. for the ship. There was also a library with books on Navigation and Ship-building. Ships were with four

masts and three masts. The ships were given names like Rajalakshmi and Jayalakshmi. The ships touched the ports of Ceylon, Singapore and Malaya. Coastal trade flourished. Timber, spices etc. were exported. Silk, glass materials, Chandaliers etc. were imported.

Conclusion

The Modi records contain several such information which will be of immense value for reconstructing the history of the Marathas in general and particularly the history of the Maratha rule in Thanjavur. They also throw light on various aspects of the social, political and economic life of the people of South India with a special reference to Thanjavur region. Even the day to day expenses of the Maratha rulers of Thanjavur are noted in the Modi records.

TRADE AND COMMERCE IN THE THANJAVUR DELTA AS GLEANED FROM COPPER-PLATE INSCRIPTIONS OF THE 16TH-18TH CENTURIES.

Pulavar S.Raju.

Some Copper-Plate records of the 16th-18th centuries collected by the Department of Epigraphy of the Tamil University supply a fund of information on some aspects of the trade and commerce in the Tamil Nadu, particularly in the Thanjavur delta, during the early modern period. This evidence has not been tapped so far for writing the modern socio-economic history. This paper attempts to highlight the nature of the available evidence.

Markets

The term *pēṭṭai* denoting a market-place is known since the Cōḻa times. But it is certain that place-names with the *pēṭṭai* suffix increased during and after the Vijayanagar period. The copper plates under study refer to a number of *pēṭṭais* in the Thanjavur District. Some towns like Thanjavur had local *pēṭṭais*, each specializing in a single commodity, e.g. *nellup-pēṭṭai*, *āttup-pēṭṭai*. Some *pēṭṭais* were named after the particular community of traders living and transacting in them. Some of the *pēṭṭais* were periodical markets *(sandai)*, like weekly markets.

Closely related to the *pēṭṭai* were the *Paṭṭaḍai*. All non-agricultural craftsmen and artisans and also traders were known by this general term. This term also denoted the shops and workshops of the traders and craftsmen. The '18 *paṭṭaḍai*' was a conventional term to denote groups of varied craftsmen and traders. Many of the *pēṭṭai* and *paṭṭaḍai* that existed in the Thanjavur town during the 18th century can still be recognized with slightly altered names. Some factories (mentioned as *pèttiri-vīḍu* in Tamil) are referred to in coastal areas.

Merchandise

Among the merchandise are mentioned articles made of iron, copper and zinc, cloth, cotton and silk threads of different colours, dyes, sandalwood, ivory, chemicals, etc. Opium was freely sold in shops. Grocery *(palasarakku)* shops were there in good number.

The merchandise were sold from permanent shops *(kaḍai)* or by street hawkers. Pack animals were used to carry articles to distant places. There were many godowns called *kiḍaṅgu*, *kiṭṭaṅgi* or *koṭṭiyam*. Brokers played a role in the trade. Different measures were in use for different articles. Grain measures (quantity) were known as *poti*, *chumai*, *kaṇḍi*, *karisu*, *mūṭṭai*, *pākkam*, etc.; measures

by weight were denoted by the terms *tulai, kaṭṭi, bāraṁ,* etc.; and liquid measures were *āḍam, kāṇam,* etc. Cloth bundles were called *kaṭṭu* or *chippam.*

Tolls *(Suṅgam)* were levied on merchandise imported into or exported from local places and also on merchandise transacted in port-towns. The merchants either voluntarily or at the command of the rulers set apart a proportion of their wares or part of their sale proceeds as *magamai* (common-fund dues) for running some charity.

Maritime Trade

There is some information regarding the sea trade also. Seagoing vessels were known by the terms *kappal, pāru, paḍagu, tōṇi* and *surippu.* Tirumullaivāyal was an important port wherefrom the paddy of the Thanjavur delta was exported to Jaffna in Sri Lanka. This trade with Sri Lanka was transacted on credit basis also.

Trading Communities

Though there existed divergent trading communities, they joined together on many an occasion for a common purpose. For instance a copper plate of 1765 from Coimbatore refers to the decision to pay a *magamai* for a charity by eight different communities, viz., the five-hundred *kuḍip-pāttam, Telugu-Cheṭṭis* of the '24 Houses', the Twelve *Nagaram,* the *Rāvuttar* (Muslims) of Vēdasandūr, the *Kōmuttis,* the Merchants of Allitturai, the *Dēvaṅga-Chettis* and the Merchants of *Sangarāsu-pēṭṭai.* Even religions or sects were no hindrance to such unity. Muslims and Christians are found to donate liberally to Hindu temples. There is an interesting record from Tiruppanandāḷ which refers to gifts of the Merchants of the Dutch Company to some renovation work in the Chidambaram temple.

Sources

1.	Darumapuram	Copper	Plate	of Krisṇa Dēva Rāya A.D. 1513
2.	Batavia	"	"	of Ekōji I A.D. 1676
3.	Svāmimalai	"	"	of Ekōji II A.D. 1679
4.	Ariyalūr	"	"	of Vijaya Oppilā Maḷavarāyar A.D.1703.
5.	Koṅganeśwar Temple	"	"	of Ekōji II A.D.1735.
6.	Thirupanandāḷ	"	"	of the Merchants of Paraṅgi-pēṭṭai A.D.1747
7.	"	"	"	of the Dutch Company A.D.1747
8.	Thañjāvūr	"	"	of Pratāp Sing A.D. 1757.
9.	Koṅganeśvar Temple	"	"	of Pratāp Sing A.D.1758
10.	Thiruvāvaḍuturai (Coimbatore)	"	"	of Krisṇa Rāja Uḍayār A.D.1765.
11.	Darumapuram	"	"	of Thulaja A.D.1770.
12.	Darumapuram	"	"	of Veṅkaṭāchalam Reḍḍiyār A.D.1795.

HISTORY OF EDUCATION IN THE TAMIL COUNTRY (1800-1835 A.D.)

P. Subramanian

"Education is not exotic in India. There is no country where the love of learning had so early an origin or has exercised so lasting and powerful an influence", says F.W. Thomas in his famous report on Indian Education.[1] But during the period under review, learning was at a low ebb due to political instability and incessant wars. Consequently education lost all patronage and support.

Indigenous Learning

At the commencement of 19th Century there were only pial schools in large villages and towns where reading, writing and rudimentary arithmatic were taught in the vernacular. There were usually two classes; the lower ones were under the control of the monitors whereas the higher ones were directly under the control of the master who at the sametime had an eye on the lower ones. Campbell who had evinced immense interest in native education had brought out all the features of the indigenous education in his famous report.[2] Though sketchy and superfluous, his report gives fairly a good account of indigenous system of education that prevailed at that time. According to his report, the first business of the child upon entering a school was to learn the letters by writing them on sand with his finger. After gaining some proficiency in writing, he was allowed to write either with the iron style on cadjan leaves or with a read on paper or on slate. After mastering the letters, he learnt the formation of words and sentences. Then he learnt to count and write from 1 to 100 and then to work easy sums in addition, substraction, multiplication and division. Then he was taught the fractions of an integer together with arithmatical tables and multiplication. In order to make them quite familiar to their minds, the scholars were made to stand up and repeat the whole once or twice every day. After gaining mastery over reading, the scholars were asked to decipher different kinds of handwriting which the masters collected from different sources. They were taught how to draft various forms of agreement which were essential to their day to day transactions. They were not deemed to be educated unless they committed to memory various verses pertaining to Ramayana, Mahabharatha and Bhagavata.[3]

Campbell, in his famous report brought out some of the peculiar features of the pial schools which were in vogue during the period under review. Except a few schools of higher learning most of them were private schools devoid of any

state control. They were not aided by the state and hence relied mainly on the support of the scholars.[4] Another interesting feature about the school was that the teachers were not properly trained or qualified persons in the art of teaching. According to Campbell this was due to the fact that the pay was so meagre that it did not induce them to qualify properly. Due to lack of accomplishment, they did not draw a large body of scholars whom they could be proud of.[5]

The indigenous schools lacked regularity and system. There was no uniform hours of work. It worked as per the sweet will of the master who could conduct suspend and cancell classes as per his whims and fancies. Many a time, there were even no buildings for the schools which often were conducted either at the house of the teacher or in a local temple or even under a large tree. Printed books were totally unknown and the scholars used pencils and the slates which were locally made.

Another peculiar feature about the school was that there was no regular period of admission. Campbell's report bears ample testimony to all these alarming features. From it we learn that the scholar could join the school at any time and leave it according to his or his parents' discretion. Many left the school after acquiring some rudimentary knowledge which could not be considered as learning. Except the dancing girls the other girls did not join these schools. It was believed that learning would spoil their modesty. Campbell says, a very few continued their studies for four or five years. "Most of them were taken away by their parents owing to poverty or other circumstances and in such cases the merest smattering of an education was obtained".[6]

Missionary Schools

The Christian missionaries evinced keen interest in indigenous education due to various reasons. Their efforts brought about a far reaching change in the realm of indigenous education. The pioneers were the Danish Missionaries who established religious schools for the instruction of the slaves of the Danish settlement. Ziegenbalg was the first Danish Missionary whose contribution in the field of education could hardly be exaggerated. In 1706 they started a boarding school with 79 pupils. By their Zest and Zeal, they were able to win the sympathy of their Government and established 21 school with their aid. In these schools, the Christian teachers were appointed to teach the truths of Christianity.

Here a reference about the Society for the Propagation of Christian knowledge may not be out of place or irrelevant. The work of the society in the field of education was commendable. In 1711, it sought the help of the Court of Directors to permit it to maintain Charity Schools through the agency of Danish Missionaries.[7] In 1713 it was permitted to open schools in the Tamil Country.[8] In 1717 the Danish Missionaries opened two charity schools in the city of Madras, one for the Portuguese and the other for the Tamil Children.[9] To begin with, the schools were not successful as the people suspected the motives of the missionaries. Gradually they realised the benefits of education imparted by them and sent their children to these schools. The Government did not help as expected and hence these schools had to be manag-

ed by the funds raised by the above society.[10]

In 1717, Ziegenbalg started a school at Cuddalore. 1772 Schwartz started a number of schools. Thanks to him the Rajas of Tanjore, Ramnad and Sivaganga started many schools for the teaching of English. In these schools English, Accounts, Tamil and Hindustani were taught.[11]

Sullivan School

Sullivan was the first servant of the English East India Company to realise the importance of State aid to education. As an official, he wanted to have direct dealings with the people without the assistance of self-seeking *dubashis*, who many a time as he experienced, misrepresented the feelings and sentiments of the people. If at least the Principal natives knew English, he felt, they would be less exposed to the misrepresentation of the *dubashis*. Though his motives were due to selfish and political considerations, they proved to be a milestone in the history of education in India. He placed his plan before Macartney, the then Governor, who in turn, sent it to the Court of Directors for approval.

The Court of Directors were much pleased with it and referred to such schools as "calculated to establish mutual good faith, enlighten the minds of the natives, to impress upon them with sentiments of esteem and respect for the British Nation and to make them acquainted with the leading features of our Government which are so favourable to the rights and happiness of mankind".[12] They approved the scheme and directed the payment of 250 pagodas a year for the maintenance of each of the schools and ended the note with the hope of obtaining extensive benefactions from the native princes.[13] When approached, the Rajas of Tanjore and Sivaganga promised to extend all possible help for the improvement of such schools. As a result, three schools were started one at Ramnad, the other at Tanjore and the third one at Trichinopoly. To begin with, they were for the higher classes and the lower classes were not admitted as they had no leisure to think about education. The Schools became very popular and the society wanted to extend the scheme to other areas with a view to making English education popular. When asked for the extension of the scheme, the Court of Directors did not comply with their request on the ground that it was not their duty to undertake such a work. Even in England it should be remembered that education was in the hands of the private enterprise, "Pious Founder".[14]

The company also did not insist because it felt it was not wise to meddle with the internal affairs of the natives. And moreover, they felt, "the Hindus had as good a system of Faith and morals as most people and it would be madness to attempt their conversion or to give them any more learning or any other description of learning than they already possessed".[15] Despite all these restrictions and restrains the missionaries continued their efforts in the field of education.

Special Features of the Missionary Schools

Missionary school, in spite of certain shortcomings played a very important role in the field of education. Unlike the indigenous school they introduced a new system of

education hitherto unknown to the Tamil Country. They taught new subjects like History, Geography, Algebra and Science and thereby opened the flood gate of western ideas and traditions which have brought about far-reaching changes in the Tamil Country. They were the first who introduced regular school hours, definite curriculam and new subjects like History, Geography and Science. This, not only was a total departure from the past but also heralded a new era.

Policy of the Government

The English East Company did not want to involve itself in the field of education due to political and economic considerations. The Court of Directors in England were also evasive and did not want to commit firmly on issues involving finance. When a request was made to enhance donation for female asylum in Madras in 1804, they refused it on the ground that the company's finance in the Madras Presidency did not warrant any addition to the subscription already made to it.[16] But when a similar request was made by Schwartz, they increased the donation from 41 to 100 pagodas per mensum for "they were satisfied that the conduct and spirit of that mission had proved beneficial to the natives and tended to conciliate them to the company's government".[17] Here their consideration was purely politica. Even the Home authorities did not pursue a systematic policy in the field of education and consequently progress of education was far from satisfactory.

The Cuddapah Scheme

In 1814, with a view to improving the character of the natives the Board of Revenue issued a circular letter inviting suggestions to put a stop to fraud, bribery and corruption which according to it, were rampant among the native servants. Munro was also of the same view. This is called the Cuddapah Scheme in which he suggested a scheme of education to provide "for the proper education and moral instruction to youngmen from the age of 12 or 13 to that of 19 or 20. The Scheme was in favour of starting an institution in each district which in the course of every year would turn about 50 to 60 youngment who would be fit for public service.[18] Pleased with such a scheme the Government conceded to try this scheme on an experimental basis with a view to getting recruits for the subordinate ranks of the Company's service.

Ross, an official of the Company was permitted to establish such schools to improve the education of the natives.[19] Ross, died in the meantime and consequently the scheme also died with him.[20] No step was taken till 1820 to improve the standard of native education which then had become stagnant due to lack of patronage and internal feuds and wars. Only in 1820, some concrete steps were taken in the direction when sir Thomas Munro became the Governor of the Madras Presidency which is known among the official circle as "Benign Presidency".

Munro and his Educational Survey

A new era began in the field of education with the advent of Munro as Governor. He was not in favour of the policy of Europeanisation and made it clear in a letter written to Lord Canning in which he wrote: "Our present system of Government by excluding all natives

from power and trust and emolument it is much more efficacious in depressing, than all our laws and school books can do in elevating their character. We are looking against our designs and we can expect to make no progress while we work with a feeble instrument to improve and a powerful one to deteriorate".[21] Again in the Minute of 1824 he asked, "With what grace can we talk of paternal Government if we exclude the natives from every important office?".[22]

This Minute will stand as a testimony to the strong faith Munro had in the natives and to his serious concern to improve the character of the natives through proper means of education. In 1822, he ordered the Board of Revenue to undertake an educational survey so as to know the real nature of native education.[23] In it he makes it clear that "Much has been written both in England and in this country about the ignorance of the people of India and the means of disseminating knowledge among them, but the opinions upon the subject are the mere conjectures individuals unsupported by any authentic documents and differing so widely from each other as to be entitled to very little attention. Our power in this country and the nature of its own municipal institutions have certainly rendered it practicable to collect materials from which a judgement might be formed of the state of the mental cultivation of the people. We have made geographical and agricultural surveys of our provinces; We have investigated their resources; and endeavoured to ascertain their population but little or nothing has been done to learn the state of education throughout the country. Partial inquiries have been made by individuals but these have taken place at distant periods and on a small scale and no inference can be drawn from them with regard to the country in general".[24] Therefore he directed the collectors to collect necessary particulars in regard the number of schools in each district, the number of scholars in each school and the caste to which they belonged. The Court of Directors, when they came to know the report, said, "We think of great credit is due to Sir Thomas Munro for having originated the idea of this inquiry".[25] They supported the policy of Munro and pointed out, "it was proper to caution the collectors against exciting any fears in the people that their freedom of choice in the matter of education would be interferred with, but it would equally be wrong he do anything to fortify them in the absurd opinion that their own rude institutions of education are so perfect as not to admit of improvement".[26] The collectors took nearly two years to complete the survey and submit the report.

Munro's Scheme of Education

Sir Thomas Munro reviewed all the reports sent by collectors of various districts and recorded his opinion in his famous minute of the 10th March 1823.[27] He was totally disappointed by the education that prevailed in the country then and felt it was due to poverty of the people and lack of patronage to education. He also felt the low quality of education was mainly due to incompetent teachers who lacked all accomplishments that were needed. He was of the view that "No progress can be made without a body of better instructed teachers than we have at present; but such a body cannot be had without

an income sufficient to afford a comfortable livelihood to each individual belonging to it". He, therefore urged that "allowance should therefore, be sequred to them by Government, sufficient to place them above want and the rest showed be derived from their own industry". If teachers happened to be superior both in knowledge and diligence, the scholars would "flock to them and augment their income", he argued. In the meantime, the committee of Madras School Book Society took interest in the cause of native education and requested the Government to permit it to establish a school for training teachers.[28]

Munro accepted it immediately and ordered the sanction of the 700/- p.m. to the society to run the above school. He pondered over the problem deeply and felt such a small measure would not be sufficient. He thought some principal schools should be started in all taluks and districts. He recommended for the establishment of two principal schools one for the Hindus and the other for the Muhammadens in each Tahsildari and it was proposed to start 300 such schools. Likewise he was in favour of starting 2 collectorate schools in each district for higher learning.[29] Accordingly it was agreed to start 40 collectorate schools all over the presidency (20 districts x 2 = 40 collectorate schools. The salary of the teachers was also fixed. The salary of the collectorate teachers was to be Rs.15/- and to that of Tahsildari Rs.9/- per mensum. He felt that the allowance was small but was convinced that "the Tahsildari school master who received 9/- rupees monthly from Government will get atleast as much more from his scholars and considering all circumstances his station will probably be better than that of a Parish school master in Scotland".[30]

He calculated the total expenses as follows:

Madras Book Society p.m.	700/-
Collectorate Schools Hindu 20x15	300/-
Muhammaden 20x15	300/-
Tahsildari 300x9	2700/-
Total p.m.	4000/-

For a year the Government had to spend about Rs.48,000/-

Munro sent his scheme to the Court of Directors for approval so that he would implement it with their consent. To them he wrote "Whatever expense government may incur in the education of the people will be amply repaid by the improvement of the country; for the general diffusion of knowledge is inseparably followed by orderly habits by increasing industry, by a taste for acquire them and by growing prosperity of the people".[31]

The Madras School Book Society was interested in the scheme and the Government wanted to entrust the task of training teachers to this Society.[32] "But as this school will form a very important part of the general system for the improvement of education, it seems advisable to make it a public institution subject to the direction and superintendence of the committee of public instruction rather than to afford the necessary pecuniary aid to the School Book Society in order that they might establish and maintain it".[33] The Board of Revenue also was in favour of securing the

sympathy and cooperation of the people and were very reluctant to go against the customs and prejudices of the people.[34] Consequently, these schools were started by the Government of Madras.

Tahsildari School

As expected candidates did not come forward to join the Tahsildari Schools. Due to lack of qualified teachers only three Hindu Tahsildari schools were established.[35] These schools were limited to reading, writing and to arithmatic in the vernacular[36] and all were admitted except the Harijans into these schools.[37] The authorities, to win the sympathy of people, allowed them to choose their school masters. This was just to obviate an impression that the Government was not in their favour.[38] In the meantime the Court of Directors also approved the scheme[39] and noted with satisfaction "We should have been very pleased that the collectors had afforded some information on the question whether any desire exists among any portion of the natives for better instruction than what their own rude institutions of education afford and how far they are disposed or by what means they might most easily be induced to avail themselves of better schools if any such should be established".[40] They were pleased with the Madras Government for having taken such a bold and innovative step. With a note of satisfaction they added:" This was clearly your wisest course but it is obvious that the success of the whole plan depends in a great degree upon qualifications which you may succeed in imparting to those who are educated in this institution".[41] They advised the Government to supervise them effectively for the success of the scheme.[42]

From the beginning, the schools did not have a smooth sailing. It was not easy for the government to get candidates and in 1829, only 12 candidates joined them.[43] The government felt it was due to lack of proper publicity. The Board of Revenue was directed to give wide publicity through the collectors of various districts.[44] By then only 8 Tahsildari schools had been established and all of them were in the neighbourhood of the city of Madras. This was due to dearth of competent scholars to be admitted into these schools.[45] Slowly they gained popularity and people began to avail the opportunity thus offered.[46] By the middle of the century they were 14 collectorate schools and 81 Tahsildari schools.[47] In 1832 the schools were reviewed and the census taken then shows that each school had not more than 33 scholars.[48] As per the review work undertaken, the Tahsildari schools in the mofussils were not upto the mark. According to the review committee it was due lack of competent teachers and proper supervision.[49] The Government felt disappointed and directed all the collectors to give their personal attention to these schools. Despite all the efforts, the scheme ended in failure.

Failure of Munro's Scheme - A Review

Munro hoped that the support of the Government would foster the growth of indigenous schools and thought the influential classes would be benefitted by it. He also hoped that they would serve as models to native schools.[50] Despite all the efforts of the Government, the scheme ended in fiasco. Perhaps Munro's premature death might have paved the way for the collapse of the scheme. People also did not

evince much interest in the scheme of education due to poverty and other factors. The officials who implemented the scheme were never enthusiastic and did not want to take initiative after the death of its founder father, Munro. The Court of Directors by their inconsistent policies ruined the very cause of the scheme. In a despatch to the Madras Government, they wrote: "By measures originally contemplated by your Government, no provision was made for the instruction of any portion of the natives in the higher branches of knowledge. A further extension of the elementary education which already existed and an improvement of its quality by the multiplication and diffusion of useful books in the native languages was all that was then arrived at".[51] They totally changed their policy and started advocating the policy of higher education for the higher classes. Their change of policy was "the improvement in education however which most effectively contribute to elevate the moral and intellectual condition of the people are those which concern the education of the higher classes of persons possessing a leisure and natural influence over the mind of their countrymen. By raising the standard of instruction among these classes, you would eventually produce a much greater and more beneficial change in the ideas and feelings of the community that you can hope to produce by acting directly on the more numerous class".[52] They wanted education should enable the natives to qualify for higher situation in the civil administration. They said, "You are more acquainted with our desire to have at our disposal a body of natives qualified by their habits and to take a large share and occupy higher situations in the civil administration of their country than is hitherto been the practice under our Indian Government".[53] They felt that the steps so far taken did not lead to such direction.[54] Therefore they recommended for the establishment of a central school at Madras where the English and European sciences would be taught. They were in favour of starting such schools in all the chief centres of the Presidency.[55] Due to the conflict between the orientalists and occidentalists, the Madras Government did not take any step to start such schools. In 1835 the controversy ended in favour of the occidentalists and hence the Madras Government had to spend all the amount allotted to the spread of English education alone. The Government of Madras abolished all the Tahsildari and collectorate schools which perhaps might have fostered the growth of native education. A step to encourage native education, unfortunately was abandoned. Even after the establishment of a stable Government, native education fell on evil days and fell through.

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ORIGIN OF THE RYOTWARI SYSTEM IN TAMILNADU

P. Chinnian

I. Meaning of the Ryotwari System

The Ryotwari System was one of the revenue systems introduced by the colonial government in India during the early part of 19th Century. It was a settlement by the government with the ryots and excluded the intermediaries. The government received the revenue payment in the form of money assessment fixed in the agricultural lands. In fact the assessment varied depending on the varied agricultural productions every year. This system was entirely different from the Zamindary System in which the proprietary rights of the lands were conferred on an individual under the conditions of a perpetual settlement. This system was also different from the Village Lease System in which a fixed sum of revenue was imposed on each village for a period of 3 to 10 years.

The ryotwari system studied for the present paper refers to the revenue system that was introduced in the Madras Presidency under the British Colonial Rule. The peasant proprietorship of the ryotwari type in ancient South India does not come within the purview of the present discussion. In the beginning this ryotwari system was introduced in Baramahal in Salem, the Ceded Districts, Coimbatore and Carnatic. On March 6, 1792 Capt. Alexander Read was appointed as incharge of Baramahal and Salem.[1] He was assisted by Capt. Munro, Capt. Graham and Capt. Macleod. Particularly capt. Read was appointed to manage the district and introduce the revenue system. He divided the district into three divisions. The first division was the Northern Area with its headquarters at Krishnagiri. It was placed under the charge of Capt. Graham. The second division the Central Area was placed under Capt. Munro with its headquarters at Dharmapuri and the third, the Southern Area was left under the charge of Capt. Macleod with its headquarters at Salem. Capt. Read established his headquarters at Tiruppatur and carried on general supervision. He disliked the renting system introduced by Tipu Sultan's Government. He wanted to introduce an efficient system which could be very advantageous to the company rule.[2]

In the beginning Capt. Read followed the renting system for two years. It was an annual settlement. Capt. Read and his colleagues tried all they could to restrict the power of the renters and protect the ryots from their oppression. Capt. Munro rented the villages and extended the benefit of farming to all the inferior *'Patels'*.[3] The

headmen of the villages lost their influence. This policy adopted by Capt. Munro was very significant during that period. Under this system the value of land of every man who paid a single rupee of rent was ascertained and a *patta* or signed agreement was given to him by Capt. Munro. From the amount of these *pattas*, the assessment of the village and a list of the rents and names of the ryots were given to the *Patel*. The *Patel* was asked to act merely as a collector of rents and he had no authority either to raise or reduce them in any situation. The *Pattas* were given to each ryot stating the quantity of his land and the nature of his *Cowle* or agreement. The *Sarkar* received no rents directly and left the people perfect at liberty to make their own bargains.[4]

Capt. Read realised the benefits of the individual system. The intermediaries were excluded. He noted under the principles such as efficient administration, benefits to the ryots, and advantages to the government. Under these principles Capt. Read planned to introduce an efficient administrative system known as the "Ryotwari System". He distributed the lands for rent to the first and second class of ryots below the *Patels*. These ryots received the lands immediately from the government.[5] Thus they came under the protection of the District Collector and were freed from the vexation of additional assessments on every favourable crop and the profit of farming was distributed to the people.[6] The revenue officials freely visited the lands and met the ryots in person.[7] The ryots also found courage to approach them and expressed their grievances. The officials took immediate steps to redress their grievances. The ryots paid only the fixed revenue amount and they were not asked to pay even a single rupee more. It was very elaborate process to contact 40,000 renters and it required devoted attention to the problems on hand. In fact Capt. Read personally attended to everything. As rightly remarked by Capt. Munro Capt. Read was an "Amildar".[8]

Under this system Capt. Read showed a very high revenue collection. The expected revenue collection from Baramahal when this territory passed under the British control was 2,41,660 Star Pagodas upto 1798 (Fusli 1208).[9] The Board of Revenue was much impressed by the efficient administration under Capt. Read. It was clearly reported that the enhanced revenue collection was made by the exclusion of intermediaries. Capt. Read reported that the suffering of the peasants were due to rack-renting and their payment reached the government treasury through impediments. Thus Capt. Read gave out a general declaration of the Ryotwari System to the peasants.[10]

On the other hand Capt. Munro declared that the land should be made over in perpetuity to the existing occupant. Capt. Graham also said the same view that a settlement on the system of small farms was impracticable. He advocated the distribution of lands to substantial inhabitants.[11] But later Capt. Munro accepted the principles of Capt. Read and became a strong advocate of the ryotwari system.[12] He advocated a plan to give the people the fruits of their industry and to get a permanent revenue to the government. This was true in the ryotwari settlement. The government distributed the lands to the small farmers for rent. The settlements were to

be annual. Every one was permitted to take whatever the land he pleased every year.

There was a decrease of revenue in 1796 and 1797. The ryots took the advantage of the selection of lands they threw up some lands annually and cancelled their engagements. The revenue of 1797 (Fusli 1207) fell off to 54,049 Pagodas below that of 1796 (Fusli 1206) and by more than 20,000 Pagodas below that of 1792 (Fusli 1202).[13] The Board of Revenue was very much upset by this decrease, and asked the Collector to explain the reason for the decrease.[14] In the meantime the Fourth Mysore War broke out and so all the revenue officers were called on to military duty. After that Capt. Read tendered his resignation. The Board was disappointed by his inability to submit a final report and his resignation was regretfully accepted. But this Baramahal experiment was very beneficial in the sense that the ryotwari system was successfully introducted in some modified form in other parts of the Presidency by Capt. Read's assistants.

II. First Experiment in Canara and Ceded Districts

Capt. Munro introduced the ryotwari sytem in Canara. The assessment was fixed not on each field but on each estate. Each estate had many fields such as gardens, pepper plantation, rice fields etc. The revenue amount was collected from the owner or tenant of the estate.[15] Capt. Munro advocated his views in favour of small estates. He said that security of revenue was equally good in the case of small estates. His experience in Canara strengthened his faith in the ryotwari system. He called his system as very ideal land settlement. He began his first survey in 1802 and this work continued till 1806.[16] As many as 2,08,819 farmers were secured by the *Cowle*.[17] The settlement was amounted to 14,13,614 Pagodas which showed an increase of 29,100 Pagodas. The Board of Revenue appreciated the efforts taken by Capt. Munro.[18]

In fact the experiment of Capt. Munro in the Ceded Districts was a great success. He mentioned the general amelioration and improvement of the manners and habits of the people which had grown concomitantly with the revenue. The annual revenue was collected smoothly and every one seemed to be satisfied with his situation. Generally people had great regard for Capt. Munro, the Principal Collector.[19] It was a remarkable activity to conduct an extensive survey, classification of lands and make assessments. The Board of Revenue praised Capt. Munro for his sincere efforts in this regard.

III. Introduction of this System in Tamilnadu

Col. Mecleod and Hurdis were appointed to take charge of the Northern and Southern Divisions of Coimbatore District respectively. Both of them were trained by Capt. Read. Col. Mecleod measured the extent of each field in the area and selected the most skilful of the surveyors to class the land into gradations. The assessment on each field was determined by himself. One of the important results was the discovery of the frauds of the village officers.

But Col. Hurdis adopted different lines. He calculated the capacity

of the soil and made his assessments. The government was happy with the efforts of Col. Mecleod as having ameliorated the conditions of the peasants as well as in a progressive augmentation of the revenue. In fact the increase in revenue collection, was mainly due to the extension of the cultivation. In 1803 (Fusli 1213) the land revenue exceeded the prices by 16,496 Star Pagodas.[20] But ryotwari system was not very satisfactory in Southern Coimbatore.

In 1805 both the Northern and Southern Divisions of the Coimbatore District were consolidated into one collectorship and Mr. Garrow was appointed as the Principal Collector. He carried on the Ryotwari Settlement year to year.[21] The ryots were divided into three classes. The persons who belonged to the first category were men who cultivated the lands to a considerable extent and enjoyed a good profit. The second category were those who with a very modest capital and made fair profit. Such groups made some other profits such as sale of their dairies, sale of their sheep and cattle and added their comforts. The majority of the population were of this group. The third category were those who looked to nothing beyond their daily wants and the maintenance of their families. They were poor and were provident to a certain extent.[22] Though the Coimbatore District had made good progress under the ryotwari system the Board decided to introduce triennial lease in 1808.[23] The *Pattas* were issued to 1,17,877 persons in this Dist.

The ryotwari system was introduced in the Carnatic in the first decade of the nineteenth century. The major portion of the Carnatic region comprised North Arcot, South Arcot, Nellore, Trichinopoly, Madura and Tinnevelly and these territories were handed over to the British by the Nawab of Arcot in 1801. The Collector recommended the introduction of the ryotwari system and the government authorised the introduction of this system with the individual ryots. A survey was made and the assessment was fixed on each description of land. The revenue was regulated on the principle of an equal division of the crop between government and the cultivators of the soil.[24] The estimate was founded on the average of the produce and the prices was settled and proper calculations were made. The revenue collection was regulated on the principle of an equal division of the crop between government and the cultivators of the soil. The assessment was supposed to be much below the former rate.

Mr. Hurdis, the Principal Collector, made the assessment after proper survey in Madura and Dindigul. The operations were carried on not only in government land but also in 12 estates. A settlement was made with each ryot separately. In the district of Nellore and Ongole the ryotwari system was introduced in 1802 (Fusli 1212) but was regulated in a manner different from other districts. This system was also introduced in the small district of Saitwaid, a part of the Carnatic in 1801. The survey of the small tract of the country was conducted in a very satisfactory manner. When this sytem was introduced in 1803 it was proved very acceptable to the people. In other districts of the Carnatic this system was partially introduced.

IV. Preliminary Survey of this System

According to the basic principles

of the ryotwari system a preliminary survey was essential before the settlement was made. Capt. Read believed that only proper and systematic survey could help him to discover the real condition of the lands. To begin with he conducted a topographical survey which was followed by a demographic and economic survey. These survey reports included the geographical information, social condition, economic standard, the products, the land tenures, the state of cultivation and other facts connected to the peasants. On the basis of these reports the British Officials understood the problems of Indian life and established an efficient revenue administration. These attempts supplied the ground work for the detailed revenue survey which Capt. Read took up in the following year.

The main object of the survey was to ascertain the *tirwa*,[25] (money survey) on particular fields. According to Capt. Read, the survey was an endeavour to attain the truth without the means of local experience and entirely by hypothesis.[26] The survey was to show the tables of the land measures and also weights and measures for different commodities. It was to include the statement of the relative quantities and price of dry and wet productions, the statistics of the progress of cultivation in every district throughout the year, the statements of the gross produce and expense of the cultivation of crops, statements of the average gross produce and average expense of cultivation as well as the cost of ploughs, the wage of labour in money or in kind and the statement of the families of the rural societies in every village.[27]

With exception of hills and rocks the extensive lands of the villages were all measured. All roads, sites of villages, beds of tanks and rivers, wastes and jungles were also included in the survey. All the cultivated lands were called by different names by the people. They were distinguished in the survey registers by different names and also a particular number was assigned to each, in the order of measurement.[28]

The method of survey varied from district to district according to the views and capacities of the collectors. It was mainly determined by local factors. Further every change of Collector was followed by a change of methods. The difficulty of conducting a full scale survey everywhere was increasingly felt. The establishment of mutual confidence between the ryots and the government by showing each party what belonged to it was another objective of the ryotwari survey. It is important to note that the survey was not intended for increasing the amount but for that of enabling the government to avoid over-taxation.

V. The Revenue Settlement

Different methods of ryotwari settlement were adopted in different ryotwari districts. The main principle of this system was the individuality of contribution and responsibility and a fixed rate of demand or a fixed amount in money on each portion of land occupied for cultivation by an individual. Capt. Read followed the principle of reducing the estimated full crop to the average price of years to constitute the revenue. The assessment was 2/3 of the average crops. This was raised or lowered according to the descriptions of lands.

In fixing the average produce of each field in favourable seasons, the assessor was guided by his own judgement of the nature and situation of the soil, by the crop or stubble on the ground or by the information of the people on the spot. The second step was to deduce the average produce in all seasons, including good, bad and indifferent years. For this purpose it was assumed that an average year's produce was equal to 11/16 of a full dry crop and 11/13 of a full wet crop. The third step was relating to the conversion of the average produce into money. Regarding the wet lands attention had to be paid to two important points. The first was the sources of irrigation and the second the amount of the ryots' labour expended to utilise them. In the lands watered by superior rivers the ryots share was 55% and the government's share was 45%. In the lands irrigated by inferior rivers the ratio was 60:40 and in the lands irrigated from tanks the ratio was 621/2:371/2. In some other lands both tank and well were used for irrigation. In the lands of that type the ryot's share was fixed at 70% to 30%.

In finalising the ryotwari settlement Capt. Munro followed three modes of settlements. The first was to make the Mouzawar Settlement'[29] of a whole district and then to proceed to the Kulwar Settlement.[30] The second was to finalise the settlement of one village and then to make individual settlement in the same village before moving to another. The third was to calculate the individual settlement in one village separately and then by adding their assessment together to make the village settlement. It is very interesting to note that once the country had been surveyed the individual settlement was more convenient.

VI. Consequences of the New Revenue System

The ryotwari system provided an economic frame that was different from all old system of land tenure. This new system influenced the factor of production and distribution of wealth. In Baramahal a great part of the land most suitable for cultivation was left to follow. Poverty prevented the ryot from making the land productive and high assessment deprived him of the fruits of his labour. Attempts were made to improve agriculture by introducing new commercial crops. The cultivation of indigo and potatoes were introduced. Abee Dubois reported that he saw that there were good possibilities of agriculture in Baramahal.[31] Capt. Read advised distribution of mulberry and nopal plants among the ryots. Thus the cultivation was extended in different parts of the country and as a result the economic condition in some rural areas was developed and economic activities expanded.

In North Arcot agricultural conditions were somewhat better. There was a perceptible anxiety of parties to retain possession of their lands and of others who under the leases had been deprived of the management of their villages. They came forward with their engagements for cultivating land. A factor which enabled the ryots readily to pay their assessments was the unusual high price of produce during the past season.[32] In the districts of Madura and Dindigul cultivation was extended by distributing increased number of *Pattas* among the ryots.[33] In Dindigul the wet land was assessed

at a higher rate than in Madura and Coimbatore. The result was that all these lands, which from their high assessment could be considered the best were thrown up and the ryots cultivated lowly assessed but poorer lands.

In some districts the ryotwari system did not result in increased agricultural output. In certain areas, owing to local circumstances, agriculture made some progress but in thousands of such cases failure was more common than success. In Coimbatore district the progress was satisfactory. More and more lands were brought under cultivation. It is interesting to note that the flourishing agriculture of Coimbatore depended largely on favourable assessments compared with other districts. From the study of the conditions in several districts show that the agriculture was closely linked with ryotwari settlement. The extension of cultivation varied with the proportion of assessment. The lowly assessed areas were well cultivated and in place where the ryotwari assessment was excessive cultivation was restricted.

In the early years of the ryotwari system the population was small in proportion to the land. It was due to political turmoil. So an attempt was made to increase the population of the districts. Every encouragement was given to the new settlers and small advances of *taccavi* in money or in grain were given.[34] The ryots were given lands on easy terms. Further the collection of revenue suffered much from the ryots habit of migrating from one village to another. Such migrations generally took place during March or April every year.[35] Col. Graham adopted some amount of restraint to check this restless spirit.

As the lands in the ryotwari districts generally did not become saleable owing to high assessments and other factors like the depression, the granting of *taccavi* continued to be a feature of the ryotwari administration. The problem of agricultural indebtedness could not be solved by this new system. The fall of indigenous cotton industry as a result of the import of goods from Europe indirectly spoiled the normal credit facilities of the ryots. Trade in all districts was affected and money circulation was practically stopped. The ryots relinguished their grain and became prey in the hands of the money lenders.

VII. Changing Structure of the Society

The population in the districts varied. In general society composed of three classes in rural areas. This division was based on social and economic status of the ryots. The first class of people belonged to different castes who followed occupations other than cultivation. They hired the *zudgars*, i.e. hired labourers, to cultivate their lands. The second class was called *kudis* or farmers. They worked in the fields. The third class was composed of *zudgars*.[36] They worked for wages and their wages were different in every village. The poverty of this class drew the attention of all the officials.

The above classes could also be differentiated by their ability to pay revenue. The first group paid their dues out of the savings they had. The second class of people had no other means and so they were forced to dispose of their produce preserving only enough for their subsistence and for seedgrain

for the next crop. The last group had no credit facilities and so they were obliged to part with all they had.

Capt. Read had noticed varied standard of living in Baramahal. He distinguished two standards. The first group were people with only necessities of life and could be called the subsistence level. In fact they formed the majority of the population. The second group were those who had the means requiring for buildings and household utensils, ornaments and observance of festivals and ceremonies. They could afford to enjoy comforts and could lead a life of comparative luxury.

In the Ceded Districts also Capt. Munro divided the ryots into three classes. The first class formed 20% of the population and paid 35% of the revenue. The second class formed 45% of the population and paid 45% of the revenue and the third class formed 35% and paid 20%. The condition of the people was not much satisfactory. The second and the third class people had merely enough after paying their dues to maintain their families. The lowest class generally worked as hired labourers. Capt. Munro observed that the labourers were eager to become independent farmers. They took a few acres of land from the government and started farming. If they were successful they continued but in case of failure they sold their stock to pay their dues and turned to be labourers again.[37]

The condition of the slaves was little improved. They had a share of the produce, generally an eighth, and in some cases lands were given to them. But in many places, where actual slavery did not exist, a kind of bondage was introduced by the ryots. In fact one of the basic principles of the ryotwari system was that of the freedom of labour.[38] The policy of the government was not in favour of slavery and orders were given that slaves should not be sold for arrears of revenue.[39] The individuals were allowed to contract, for a given sum, to labour for a fixed period of time. Such contracts should be in writing and binding only upon the individual who executed it and not upon the family, his wife and the children. The slaves were declared free to sell their own properties without any interference on the part of their masters.[40]

One of the important effects of this new system was that the ryots were freed from the clutches of the heads of the villages at whose mercy they had hitherto lived.[41] This system rectified the social dislocation and social mobility. The collectors took remedial measures and guarded against any infraction of the landed tenures of the country. Capt. Munro wrote that the ryot had a certain degree of pride in being a government tenant.[42] In 1897 the Government of Madras noted the general amelioration and improvement of the manners and habits of the inhabitants of the Ceded Districts which had kept pace with the increase of revenue under the ryotwari system.

Under the ryotwari system much care was taken not to wound the religious sensibilities of the people. In 1798 Col. Graham recommended that each temple should be liberally endowed by the government. The rural society held their new white rulers in great awe and esteem in their minds as the British in India

were associated with great power and glory. As the ryotwari system brought them into direct contact with the British they were much satisfied. The confidence in them and in their new system gave them a happy and contented life.

Much attention was paid to the due performance of the religious ceremonies. The government had sometimes to authorise disbursement for occasional religious rites to satisfy popular sentiment. Though there were no changes relating to the people's food, clothing, shelter and other habits there were changes in behaviour and attitude. The economic condition in some village was deplorably bad. In 1806 the Collector of Bellary observed that the ryots were poorly clad and ill-fed due to their extreme poverty. In the same year the Collector of North Arcot observed that many houses of the ryots ware without roofs. There was no noticeable improvement in their economic standard.

Conclusion

Thus ryotwari system was nothing but settlement with the individuals and excluded the intermediaries. Under this new system the government collected the revenue directly from each individual ryot. The ryotwari administration fully restored the confidence of the people and they were able to attend their cultivation with less disturbance from outside. Some of the ryotwari officials believed that improvement in agriculture and high assessments reciprocally promoted each other. But in fact the natural result of the high assessment was defective agriculture and poor yield from the soil. Poverty prevented the ryot from making the land productive and the high assessment deprived him of the fruit of his labour.

In Coimbatore and Carnatic the ryotwari system of revenue administration helped the extension of cultivation. The cultivation everywhere was stepped up by making the peasants cultivate a required extent of land. But the peasants, in many cases, were left at liberty to extend or contract their cultivation every year in the way they might think most advantageous for them. From the study of the conditions in the several districts the fact that emerges in that agriculture was closely linked with the proportion of assessment. That is, the lowly assessed areas were well cultivated and in places where the ryotwari assessment was extensive the cultivation was restricted.

The authors of the ryotwari system did not seem to realize that novelties should be slowly grafted on an integrated with, the existing life of the people. On the other hand, under the ryotwari system, changes were in many cases sought to be imposed without reference to the pre-existing institutions. In spite of the lenient policy pursuaded towards *mirasidars* and other headmen they could not completely regain the power and privileges which they had lost under the old system.[43] To this extent the ryotwari system disturbed the social harmony which existed before its introduction. Although attempts were made to cut at the root of the power and influence of the headman, there was evidence of their influence continuing in a subtle manner. But generally the headmen as a class lost in importance and power. Ryots, by their direct relationship with the government, gained something which formerly they did not possess. This was implicit

in the introduction of the ryotwari system.

As mentioned in the earlier pages this ryotwari system brought the peasants into direct contact with the British and they had direct dealing with the revenue administration. They imagined that such contact added to their stature also in a way that was not possible when they were under the local renters, however powerful and good. Under this system care was taken not to interfere into the religious and other ceremonies. The maintenance of the religious institutions under the ryotwari system impressed the ryots with a sense of the superior benefits they enjoyed in new dispensation.

Throughout the period under study the privileges of certain castes were recognised under the ryotwari system. Some of the ryotwari administrators raised objections against this practice. The influence of some of the privileged castes was too great to be ignored by the administration. The collectors thought it advisable to conciliate the members of this influential section of the society by giving them the usual remissions and assessing them comparatively favourable.

It was observed that no major change in the habits and customs of the people occurred by the introduction of this new system. Even in Coimbatore, where ryotwari system had a long run and where its working was fairly satisfactory, the Collector noticed and material change in the people's dress. Only those farther up the social and economic scale appeared to be better clothed. The new system released no energies which could have brimmed over into lusty living. In 1806 the Collector of South Arcot noted the miserable condition in most of the villages. Even the system caused no change in the popular habits of diet. But in some places, owing to the defective functioning of the ryotwari system, the condition of the people was especially depressed.

Judging by the evidences it may be concluded that the ryotwari system affected the social structure and not the normal life in the country. The ryotwari officials refrained from intrusion into the areas of religion, culture and also into the areas of the social and private life of the rural population. In broad terms it may be said that the complex pattern of the rural society was affected little by the general introduction of the individual settlement. Even in regions where this system was operating with success the habits of the people and their standard of life were not much altered. But the social fabric was certainly affected by the new revenue system and revenue administration but the process of change was certainly slow.

NOTES

1. *Baramahal Records*, Letter from Mr. Barry close to Capt. Read Dt. March 31, 1792.

2. *Baramahal Records*, Sec. VI, Letter from Capt. Read to Col. Maclod, dt. Jan. 27, 1796.

3. *Baramahal Records*, Letter from Capt. Munro to the Board dt. Aug. 25, 1806. Headman were called '*Patels*. They collected rents from the peasants and also responsible for general supervision of the revenue administration.

. Letter from Capt. Munro to the Board, dt. Aug. 25, 1806.

5. *Baramahal Records*, Letter from Capt. Read to Mr. David Haliburton, dt. Aug. 10, 1794.

6. *Ibid.*

7. *Board's consultations*, Vol. No. 69, p. 1779, (of year 1794).

8. *Letter from Capt. Munro* to Capt. Allan, dt. Dec. 26, 1793.

9. *Boards Consultations*, Vol. No. 230 of 1794, p. 3402.

10. Arbuthnot, *Sri Thomas Munro*, Vol. II, pp. 341-348, London 1881. (Selections from Minutes and other official writings, ed. by Mr. Arbuthnot).

11. *Baramahal Records*, Letter from Graham to Read, dt. Aug. 24. 1797.

12. *Ibid.*

13. *Report of the Board of Revenue*, 1797, Vol. IV, p. 76.

14. *Board's Consultations*, Vol. No. 210, 1798, p.7121.

15. *General Reports of the Board of Revenue:* Vol. No.27, 1792, p.272.

16. *Report of the Board of Rev.* dt. Oct. 10, 1807, Vol. 13, p.16.

17. *Cowle* meant promise, agreement or contract.

18. *Revenue Despatches to England.* dt. March 23, 1804, Vol. No.8 pp.62-63.

19. *Ibid.*, dt. Oct. 21, 1807.

20. *Revenue Consultations*, June 2, 1804, Vol. No. 134, p.1361.

21. *Board's Consultations*, Vol. No. 707, p.1816.

22. *Ibid.*, p. 1816.

23. *Ibid.*, Jan. 28, 1808, Vol. 459, pp.755-56.

24. *Revenue Despatches to England*, March 23, 1804, Vol.8, pp.73-74.

25. *Tirwa* or *Teerwa* means money survey.

26. *Baramahal Records*, Section VI, Letter from Read to Macleod, dt. Jan. 29, 1796.

27. *Ibid.*, Read to Lord Cornwallis, d. July 1, 1793.

28. *Capt, Munro's Report*, dt. July 26, 1807.

29. *Mouzawar Settlement* means a Village Settlement.

30. Kulwar Settlement means Individual Settlement.

31. *Baramahal Records*, Letter from Dubois to Hamilton, Dec. 8, 1796.

32. *Board's Consultations*, Vol. 926, dt. 10.10.1822.

33. *Pattas* means a lease granted to the cultivators on the part of the government.

34. *Baramahal Records*, Letter from Graham to Read, dt. Oct. 22, 1794. *(Taccavi* means advance of money granted to the tenants

for cultivation when necessary means are wanting).

35. *Ibid.*

36. *Zudgars* means hired labourers.

37. *Letter from Munro to his father* Sep. 21, 1798.

38. *Capt. Munro's Report*, dt. Aug. 25, 1805.

39. *General Reports of the Board of Revenue*, Vol. 27, p.372 dt. Jan, 3, 1820.

40. *Ibid.*

41. *Board's Consultations*, Vol. 429, p. 4053, dt. July 17, 1806.

42. *Ibid*, Vol. No. 416, p. 7085, Sep. 26, 1805.

43. *Mirasidar* means the proprietor of land.

A HOLISTIC VISION OF HISTORY

S. Nagarajan

History is, to a certain extent, perceived in the light of our experiences and philosophy. Such perceptions yield rich harvests of unending dialogues, which enrich the opulent History and Truth. This paper is an attempt to find a holistic view of this Aristocrat History -- an attempt to perceive a starting point, structure and the primary determinants with illustrations from the History of India. Thus an endeavour is made to present a view point, a perception of that majestic, incomprehensible History. In that context, this paper attempts to examine and explain step by step the following ideas in that order, to discover the meaning of History: (1) History is moulded by environment and Holistic life-force; (2) Magnifying Macro-ideas of the Holistic life-force knit together culture and civilization; (3) All these ideas which compose culture and civilization are those of significant Actors, who weave historical memory, (4) These significant Actors are -- (a) the mythological Supreme Beings, (b) the semi-mythological Supreme Beings, (c) the Mundane Supreme Beings and (d) the significant others namely, (i) Paramount Actors, (ii) Star-luminaries, (iii) Back-seat Actors, (iv) Big-wigs and the (v) Local notables, (5) The masses constitute the background, the environment of all these actions and hence history is a joint endeavour, a collective work of a people, (6) History appears to conceal some mystery and this mystery is its source, the elusive single Reality-God, which clothes History with a monistic-pluralistic vision of the Absolute. Still an attempt can be made to comprehend this mystery with the help of a holistic or psychic-psycho-autonomous history.

Geography is the Womb

History is flowing Time, waking up memory-waves. Time cannot move in a vacuum or in *sunya*. Time blossoms in space. This space is Geography or the environment-the Eternal Stage on which man is the dancer, other creations are the musical accompaniments and History is the Dance. Hence History is a Dance-painting drawn on the canvass of geography and is partly the culmination of the interaction between man and his environment.

The Geography of India, its physical configuration, its mountains and rivers, its climate and soil have influenced the history of India significantly. First let us take the influence of mountains. The northern Himalayas "the Great sentinel of the North" promoted peaceful inter-state relations between India and China till 1962, when China encroach-

ed on the borders of India for the first time. Islam walked into India through the open-gates of the north-western Himalayas and had remarkably changed the destiny of India. It had even changed the traditional geographical concept of Bharat that is, India by establishing Pakistan, Bangladesh and India -- the triplets of ancient Bharat. Next let us take the influence of the sea and rivers. Christianity came to India via the sea lanes. The Bay of Bengal carried Indian Culture and 'Greater India' to south-east Asian countries. The richness of the Indo-Gangetic plains facilitated the establishment of big empires in that region. Deccan continued to remain aloof from the political upheaval of the north and it took a lot of time before any conqueror of the North could conquer South.

The ancient Indians did not lack geographical awareness. The *Rigveda,* for example, proclaims, "Strike the evil aggressor, win the waters....." *Yajur Veda* and *Atharvan* talk of the "peace of sky, the peace of mid-air, the peace of earth, the peace of waters, the peace of plants .... the peace of the Universe".[1] A complete picture of a major part of the south-eastern Asia is presented in Ramayana. The geographical matter contained in the Mahabharata is immense. The geographical material of the 18 *Mahapuranas* is contained in their first two books *Laksanas,* which deal with cosmogony, cosmology and cosmography.[2] Kautilya's Arthasastra also contains useful geographical information.

The works of the ancient Indians were not intended to be text books of geography or of scientific history and hence they inserted incidental geographical information only at relevant places depending on the theme or topic discussed. Hence to believe that only historians like Michelet and J.R.Green are pioneers in discovering the interaction between geography and history is an exaggeration. Because like J.R.Green the ancient Indians too were aware that landscape is "the fullest and most certain of all documents",[3] eventhough they lacked sophisticated modern scientific historical sense.

Holistic life-force and the Three *Gunas*

From the foregoing discussion it is evident that Man has learnt the art of utilising the bounty of Nature and to live in harmony with it. The means employed by man to woo Nature and to fashion his life in general, is his holistic life-force. Holistic life-force is the expression of the total personality of an individual. It is the sum total of his whole being. It is shaped by desire. Love, joy, sorrow, hatred, ambition, pride, fear, jealousy, love of fame, attractions and repulsions, the urge for possessions of various kinds small or great, small desires and feelings such as the desire for food, sexual desire, small likes and dislikes, vanities, quarrels, love of praise, anger at blame, and a host of numberless things together constitute the holistic life-force. We also give mental expression by thought, speech or otherwise to the emotion, desire, passion, sensation and other movements of the holistic life-force. And history is shaped only by this holistic life-force, holistic life-force interacting with other holistic life-forces and holistic life-forces interacting with the environment. Hence the holistic life-force could be described as the Being of History or as the intelligence and self-awareness of the

spirit or the zeitgeist.

The holistic life-force functions through three *gunas* or qualities namely, *Sattva*, *Rajas* and *Tamas*, which are intertwined in each and every individual. The manifestation or the predominance of anyone of these *gunas* depends on one's progress towards purity. For purity, physical and mental, all uncleanness, all that would draw the mind down must be abandoned. Lesser the spontaneous longing for sense-pleasures greater will be the purity of the heart. Thus if one has less longing for *artha* (wealth, material well being), for *kama* (love of all kinds including love for power, fame, etc.) and even for *dharma* (ethical living, righteousness) and more love for *Moksa* or spiritual perfection or freedom from sense-desires, then he would be progressing towards purity. If purer, *Sattva guna* manifests, less purer, *Rajas* rushes as action and less still, *Tamas* envelopes. Bhagwan Rajneesh observes, "Now physicists are ready to agree with *yoga*. They have split the atom and they have come across three things: electrons, neutrons, protons. Those three are of the same three qualities: one is the quality of light-*Sattva* stability; another is of the quality of *Rajas* activity, energy, force and the third is of the quality of inertia - *Tamas*. The whole world consists of these three *gunas* and through these three *gunas* a man of awareness has to pass. He has to experience all these three *gunas*. And if you experience them as a harmony, which is the real discipline of *yoga* ....".[4] The following *guna* box will give an idea of these *gunas*. (For example refer Gita).

Sattva	*Rajas*	*Tamas*
The quality that illumines, virtue, goodness; kind and unselfish action, equanimous and balanced mind, non-attachment, non-egoism, contentment, serenity, calmness, happiness, objectivity and true perspective; knowledge of unity in diversity.	The quality that drives to action, pride, self-esteem, stubborness, greed, egoistic action, incessent action, attachment to objects of desire, violence, wickedness, happiness and sorrow, mere indulgence in physical pleasures, longing, impatience.	The quality that hides or darkens, inertia, self-depreciation, despondency, blind indulgence in bodily pleasures, irrationality, laziness, obstinacy, lack of discrimination, heedlessness, mistaking stagnation for self-sufficiency, indifference to progress.

There exists no society which is solely of *Sattvic* people and uptill now it has not been possible. India is primarily a *Sattva-Tamas* nation and its holistic life-force's primary tendency is to move towards *Sattva*. All Indian spiritual teachers, Super Beings like Rama and Lord Krishna, founders of religion like Buddha and Mahavir, saints Ramanand, Mirabai, Chaitanya, Ramakrishna, etc., are all embodiments of *Sattvic* force. Asoka's *Dharmavijayin* policy, Gandhiji's non-violence, Nehru's non-alignment and *Panchasheel* are all *Sattvic* political philosophies. Gandhiji's *Sarvodaya*, Vinobhave's *Bhoodan* are all *Sattvic* economic Philosophies.

The west is *Rajas* - too much

activity and speed is the symbol. India is very slow moving and at sometimes not moving at all and hence she also has Tamas in her being. Generally from the time of Mahmud Ghazni's invasion of India in the eleventh century A.D. upto the blossoming of Renaissance in the nineteenth century Hindu India was enveloped by *Tamas*. Rarely, a Nanak, a Chaitanya, a Kabir, a Sivaji, a Raja Raja, a Krishna Deva Raya appeared in their midst even during this dark age of the Hindus. Ancient India was not totally *Sattva-Tamas;* infact Hindu Northern India upto seventh century A.D. was moulded by *Rajas-Sattva gunas.* Islam as a political force exhibited *Rajasic* quality. India's freedom struggle manifested *Sattva-Rajasic gunas.* In short History is generally shaped by *Rajas Sattvic gunas.* Active people mould it.[5]

Magnifying Macro-Ideas

The *gunas* of the Holistic life-force always find mental expression as thought, speech or otherwise. Aspirations, ambitions, emotions, sentiments and thoughts mix, merge and emerge as ideas. Hence ideas flow from the whole, from the total personality of an individual. Some ideas are magnified and become embodied social-waves and hence are the property, the dreams, the hopes, the conscience, the consciousness of he collectivity. These magnifying macro-ideas shape both the political and non-political life of the collectivity.

Such magnifying macro ideas have shaped the history of India too since the ancient period. For example, in India since the ancient period for a long time a monarch was a sentimental symbol and influenced by this idea, many were even ready to die for him. The Hindu socio-political and other institutions are the offsprings of the vedic thought, *upanishadic* thought, *Gita, Dharmasastras, Dharma Sutras, Arthasastras, Saktism, Saivism, Saiva-Siddhanta, Visistadvaita,* Raja Ram Mohan Roy's ideas, the philosophy of Sri Ramakrishna; Vivekananda, Gandhiji, etc. Similar magnifying macro-ideas have moulded Indian Art and Architecture including Fine Arts, Medicine *(Caraka Samhita),* etc. Many great Indians were instruments of such ideas. Hence it is not surprising when H.G.Wells remarks that the history of ideas is the essence of human history[6] Allen Newins too observes, "It is the special glory of history that it touches the realm of ideas at more points than almost any other study. Great ideas of any civilization create the uniqueness of any age".[7]

Culture and Civilization

Hence magnifying macro-ideas knit together the political and non-political human values and institutions which are all the symbols of culture and civilization and the latter are often used as synonyms. All those inventions of man which have tangible individual physical identity - e.g. buildings, transport vehicles, machines, artificial commercial products etc., could be described as the expressions of civilization. But all those discoveries of man which deal with man himself directly and which are both tangible and intangible, seen and imagined with a personality of their own, respectively - e.g. family, tribe, caste, class, state, nation, society, etc. - could be described as the images of culture. For example a Nation has a tangible geographical personality as well

as intangible common values and traditions. These values are often emblems of belief. Beliefs change from time to time. *Bharat* or India for centuries was only a cultural and geographical concept. Today it has also become a single political concept. *Sati*, infanticide, child marriages, joint-family structure were beliefs before the nineteenth century but today living as widows, widow-remarriages, divorce, late marriages, family planning, nuclear family structure are our accepted values and beliefs. Thus culture expresses our individual or social values and beliefs and deal directly with ourselves. W.H.B.Court says that history free of all values cannot be written.[8]

Both culture and civilization are not rigid anti-thesis but synthesis of human values embracing all spheres of human activity. Thus we talk about political culture, technological culture, rural culture, urban culture, Hindu culture, moral culture, etc., All activities of man are the by-products of and the index of culture and civilization. And history is nothing but the story of culture and civilization, which together constitute the body of History.

Role of Select Individuals

Many magnifying macro-ideas which have shaped culture and civilization are the contributions of select individuals. We do not know the names of all of them, e.g. the unknown Indian who invented the concept of zero, which infact is the foundation of many modern scientific achievements. Not all those who discover and invent become famous. e.g. the names of Indians to whom Manu is indebted are not well-known.

Some magnifying macro-ideas undergo change by additions, enlargement and distortions e.g. Buddhism. Some individuals are both the originators and actors of their ideas e.g. Mahavira, Asoka renouncing war, etc. Some others are the instruments of actions of magnifying macro-ideas: e.g. Chandragupta Maurya was an instrument of Kautilya's ideas, Vivekananda of Ramakrishna, etc. Regarding some magnifying macro ideas we do not have clear evidence about their originators, e.g., the brain behind Samudra Gupta's, Raja Raja's Conquests. Hence we can with Carlyle say that ".... all things we see standing accomplished in this world are properly the outer material result, the practical realisation and embodiment of thoughts that dwelt in the great men sent into the world".[9]

Heroes of Indian History

Heroes have shaped the history of India from time immemorial. Since the establishment of the Magadhan empire (B.C. 544 - B.C. 493) more than 65 dynasties have ruled all over India. Of these more than 440 rulers belonging to 39 important dynasties have played a vital role in making the destiny of India till the advent of India's independence. (This list includes also 45 Governors General of British India).[10]

From this list of 440 kings we can choose only around 40 as heroes who contributed significantly. They are (1) Chandragupta Maurya, (2) Asoka, (3) Pusyamitra Sunga, (4) Gautamiputra Satakarni, (5) Kharavela, (6) Kanishka, (7) Chandragupta-I, (8) Samudragupta, (9) Chandragupta-II, (10) Harsha, (11) Mahendravarman, (12) Pulakesin II, (13) Narasimha Varman, (14) Yashovarman of Kanauj, (15) Lalidaitya of Kashmir, (16) Dharmapala, (17) Vijayasena, (18)

Bhoja, (19) Raja Raja, (20) Rajendra I, (21) Balban, (22) Ala-ud-din Khilji, (23) Vishnuvardhana, (24) Krishna Deva Raya, (25) Babar, (26) Sher Shah (27) Akbar, (28) Aurangzeb, (29) Sivaji, (30) Baji Rao, (31) Hyder Ali, (32) Tippu Sultan (33) Ranjit Singh, etc. In addition Tilak, Gokhale, Gandhi, Jawaharlal Nehru, Indira Gandhi and foreign invaders Darius I, Alexander, Toramana, Mihirikula, Muhammed-bin-Kasim, Mahmud Ghazni, Shaheb-ud-Din Ghori, Timur, Nadir Shah and Ahmed Shah Abdali have also changed the fortunes and fate of India.

Causes for Hero-Worship in India

1. Caste Structure

The caste structure, which permitted the Kshatriyas to rule, legitimised and systematised the monarchical form of government in India since the ancient days. The Hindus began to worship monarchy. They even believed that the king was the cause and maker of his Time (*Rājā Kālasya Kāranāha).* Hence the Indians developed the habit of obeying and worshipping the authority of the monarch, as a God.

2. Belief in Fate and *Santa Rasa*

Faith in fate, in reincarnation, in divine and non-human agencies encouraged them to accept everything including obedience to authority as a consequence of the divine will and as the fruit of their actions (including those of earlier births). This developed in them the quality of *Santa-Rasa* or calm resignation or acceptance.

> The East bowed low before the blast
> In patient deep disdain;
> She let the legions thunder past,
> And plunged in thought again.

3. Absence of Revolutionary Consciousness

Indians have been without protest, voluntarily accepting all kinds of inequality including caste inequalities. Consequently they did not develop revolutionary consciousness. Infact till the beginning of the twentieth century seldom hear about mass revolution in India and we read only about occasional conspiracies, revolts, intrigues, murders and fratricides.

4. Source of Power

The king became the source and substance of power. He distributed rank and precedence. He can exert pressure, employ violence and cause status anxiety and status dislocation.

5. State and Nation

The king thus became a synonym for State and Nation and around him State's stability, national unity, hegemonic aspirations, *Dharma* or moral principles, prestige of the people revolved. The preservation and promotion of all these depended on his personality to a certain extent. Absence of obedience could also mean the outbreak of anarchy or chaos and hence people's fear of unwelcome alternatives also nurtured hero-worshipping tendencies; sometimes even to a stupid extent.

6. Achieved Status

The Hindu political life was governed by what Mahabarata describes as the *Matsyanyaya* doctrine, i.e. the strong would devour the

weak like fish in water. Hence a king's continuation in power to a certain extent depended on his capabilities. In fact only the application of this doctrine originated many new dynasties in India since the vedic period. Hence a king also achieved status by merit. The Indians not only admire efficiency and political wisdom but elevate virtue like honesty, integrity, self-sacrifice in political life to sublime level. A few like Asoka, Gandhiji, Jawaharlal Nehru achieved status because they had these special traits.

7. Ascribed Status

It means inheritance of ancestors' status. Many Indian kings owed their ascribed status to hereditary form of government. But still their continuation in power also depended on achieved status because of *Matsyanyaya* framework of life. Kings like Raja Raja are best examples of this combination of status in them.

Hence it is not surprising to find that the contemporary Indians of each era recorded what pleased their patrons. e.g. *Ithihasas* which for example contained *Narasamsi* or hero lauds, popular *Vamsa* or geneology type of literature, the popular biographical literature of Indian muslim historiography which mainly recorded the deeds of "grandees and ministers, thrones and imperial powers". For example, Barni says that one of the benefits for the study of history is that it introduces us to lives of great men, prophets, saints, thinkers and sultans. He also adds that he is against recording about the "lowly and base" people.[11]

Paramount Actors

Thus the history of a people appears to revolve round the magnetic Paramount Actors. Paramount Actors are invariably grandees, mighty majestic personalities and many in the list of 40 Heroes of Indian History mentioned earlier, can be placed in this category. Invariably they are sublime, lofty and charismatic personalities. Many of them during their life-time create a sense of indispensability and irreplaceability. They need not always occupy positions of authority and rule and still may be leaders of their people, e.g. Gopalakrishna Gokhale, Subash Chandra Bose, Bal Gangadhar Tilak, Jayaprakash Narayan, etc. Some of them are *Satvic-Rajasic* forces like Jawaharlal Nehru, or *Rajasic-Satvic* forces like Akbar, or *Rajasic* forces like Pulakesin II and Indira Gandhi. They may be national or regional heroes of a people.

A paramount Actor might give the appearance as the centre of action of his epoch but still the history of an epoch is not the monocasual consequence of the ideas and actions of one Paramount Actor. History is not a monologue of an monoaction play of a single individual because the Paramount Actor does not exist in isolation. A Paramount Actor lives with his people and together they weave History. But in that history of an epoch a Paramount Actor becomes the profile, the mouthpiece, the symbol of his people, the dream, the rhythm and the dance of his people, the hope and soul of his culture the spirit of his time and the mirror of his epoch.

Significant Others

Even then the history of an epoch is not a monotonous dialogue between a Paramount Actor and his people. It is an interaction of many significant personalities. Moreover a Paramount Actor springs from a crowd only at certain epochs suddenly and hence not a constant history-making force. The constant continuous history-shaping energy arise from the significant others and also from the man-in-the-street. They are the Supreme Beings, Star-Luminaries, Back-Seat Actors, Big-wigs, and the Local Notables, respectively.

Super Beings are those heroes of a people who leave indelible memory-imprints on a people and whose thoughts and ideals continue to attract and influence the values and the behaviour of a people. They live as heroes of eternity. They could be classified into three groups. Mythological Super Beings are the popular darlings given to posterity by our venerated epics and other literature. e.g. Savitri, Kannagi, Harishchandra, Sakuntala, Prahalada, Markandaya, etc. Secondly the semi-mythological Super Beings are those idols of a people, for whose real existence there is no unassailable proof: e.g. Rama, Sita, Krishna, Dharmaputra, Arjuna, Bima, Draupati, Gatotkacha, Bhisma, etc. Thirdly the Mundane Super Beings who really lived with us: e.g. Buddha, Mahavira, Asoka, Gandhi, etc. These three groups are always of those heroes with *Sattva . guna* and hence are sublime and lofty examples and inspiration. They are always the constant virtue-waves of a culture.

Back-seat Actors are those rulers who occupy the throne when a Paramount Actor fails to appear in an epoch and who seldom leave a record of indelible achievements. They may be a nullity or obscure ciphers or objects of indifference or of contempt or even unnoteworthy and inconsequential. Many weak kings who had small roles in politics could be placed in this category.

Star-Luminaries distinguish themselves by note-worthy ideas and actions and hence are the worthy pillars of a society. They may be rulers or leaders of a movement or ministers and regional/national personalities: e.g. Kautalya, Mahamud Gawan, Katta Bomman, Raja Ram Mohan Roy, Lala Lajpat Roy, Lal Bahadur Sastri, etc.

Big-wigs are those who are powerful and significant enough to affect the lives of others to some extent and they may have weight and influence. They are the sculptures in the pillars of fame. Under this category we may group many distinguished citizens who occupy positions of authority or those by contemporary Indian social and cultural parameters have won *Lalit Kala Akademi Awards*, *Sahitya Akademi Awards*, *Sangeet Natak Academi Awards*, *Arjuna Awards* in Sports or National Film Awards, etc. They are those who contribute to culture in a special way and some act as influential tunnels for cross-fertilization of ideas and movements.

Local Notables are those crowned and uncrowned leaders of a locality or of a local community and hence have power and influence over their groups: e.g. Muthuramalinga Tevar's hold over Thevar Community in Tamil Nadu, Bal Saheb Thakre's hold over *Shiva Sena* in Maharashtra, etc.

Hence, History presents men and situations in many dimensions and at many levels simultaneously. Heroes belonging to all walks of life - politics, education, literature, science, journalism, law, religion, social reform, business, industry, etc. working in different spheres of life, holding different ideas and following different methods have contributed to the growth of national consciousness or development of society and to the making of India. *The Dictionary of National Biography* 1800-1947 edited by S.P.Sen, Institute of Historical Studies, Calcutta, which has included the biographical sketches of 1400 Indians is one such work attempting to record the tangible contributions of many important personalities. Even during the vedic period more than 100 eminent heroes like Jaimini, Satyakama, Yajnavalkya, Agastya, Maitreyi, Lopamudra, Vyasa, etc., have contributed to the growth of national consciousness.[12]

Infact the Hindu way of life including Hindu social institutions are the result of the collective endeavour of many eminent personalities and hence not the brain-child of a single individual, at any epoch. It is the inherited wisdom and collective memory and the collective will of the inhabitants of India manifested in the manifold activities of their lives. Trevelyan observes, "The lives of rival statesmen, warriors and thinkers, provided they are good books, are often the quickest route to the several points of view that composed the life of an epoch ... several biographies are often more deeply instructive than a single history".[13]

Masses

However George Kitson Clark sceptically observes that history "described entirely in terms of relationship between important individuals at the centre of politics is history without background and, therefore, obviously questionable. But history without a background is better than history with a false background provided by well worn phrases about whose general accuracy no one has ever bothered to think".[14] It is indeed true that history gains depth and more weight, more than its obvious and immediate meaning, only when it flows as a sea-whole, as a totality. A significant historical personality is only a wave, may be an autonomous wave, but the wave has meaning only as a part of the Ocean. Hence the collective ideas and actions of eminent personalities flowing together with the collective endeavour of the masses compose the history of a people.

Masses give the appearance of haphazard generalisations, vague nebulous forces. They create a feeling as if each one of them do not possess an individuality in the stream of historical consciousness. In crowd behaviour they seldom spring into limelight as individuals. During times of peace they are significant silent crowds and muffled voices conforming, acquiescing with what they get from the rulers. The rulers are permitted to function as their enlarged selves and hence the ruler and the ruled have stable-identity. The Indian masses have been usually passive, sedate, quiet, peace loving, self-security minded and wholly family-centred. They have functioned as responsible torch-bearers of Indian culture and civilization. When they never had eminent leaders it was the masses who preserved the Hindu tradition during the Muslim rule in India and hence have contributed

preeminently to the unbroken continuity of the Hindu heritage. The masses are the psychic-energy, the concealed springs and the sleeping valcanoes. They function peacefully as active collective will during election time in democracies and have the potency to explode as revolution. No wonder they constitute the environment, the background of historical actions and memories.

In short the leaders and the masses form an organic whole like the head and body of a man. To omit or to completely ignore either of them is a genetic fallacy. All human institutions percolating down to the nuclear-family structure have this organic functional unity. The leaders and the masses support each other like a balance and hence history is the joint-endeavour, the collective labour of a people as a whole.

Monistic-Pluralistic Vision: Psychic-Psycho-Autonomous History

This collective labour of a people is the manifestation of the joint action of all the holistic life-forces. The free will-play of the holistic life-force on the conscious plane can be understood and explained rationally to a limited extent. However all actions are not the expressions of the conscious and there are certain apparent irrational, non-rational actions and forces, which need explanation and without which history is incomplete.

For this we have to study the working of the mental holistic life-force and the explanation given to it below, is from the Hindu point of view as explained by Swami Vivekananda, Sri Aurobindo and Bhagvan Rajneesh[15] our conscious life is but a small part of our consciousness just as the visible part of the iceberg is only one seventh of the whole, the rest being submerged in and one with the vast Ocean of cosmic existence. What is submerged are the unconscious, subconscious and superconscious levels of the same mind. The unconscious and the subconscious are the vast mass of sunken thoughts and actions of our old conscious thoughts and actions, including those acquired in our previous incarnations. Normally on the conscious plane we are not aware of them and hence many times we are not conscious of their promptings and influence over our actions. Usually they come out when they get the right stimulus. Psycho-history and psycho-biography school attempts to study their influence on history with the help of hypothesis and circular arguements. Sometimes this school takes a partial truth or a local truth and generalises unduly and tries to explain the whole field of nature in its narrow terms.[16]

With psycho-analysis you remain on the same level of consciousness and you are adjusted to the same level again. At the most psycho-analysis can be a cure, but as problems go on arising, it is not preventive. Only if the level of consciousness increases and if there is a maximum manifestation of consciousness, there is a minimum of problems. In total consciousness problems disappear and infact in total consciousness problems cannot arise. A psycho-analyst like Wilhelm Reich can go mad, not a Buddha.

Hence, historical analysis at the level of a Buddha consciousness or total consciousness might be attempted to offer explanations to certain events of life, for which mundane rational explanations are not convincing. For we see some

are born blind or with other defects; some die young; empires unexpectedly spring and vanish suddenly; civilizations rise and fall; fortunes smile unanticipated on a nation or on an individual; floods, drought, famine earthquakes, upset all our calculations; a child that falls accidentally from a multi-storey building at times escapes unhurt; many astrological predictions come true, quite a mass of them, if we take them altogether; miracles happen in the life of a Jesus or a Saibaba and sometimes even in an ordinary individual's life - How? These all point out human limitation and the limitation of the conscious free-will.

The Hindus trace many of these causes to fate or *karma*. Each good or bad action has a reaction, including actions of our previous births and hence we become fate by our actions. This fate binds us because the past of the soul has an effect on its future. Even while undergoing old fate from the past, we are also given free will and our will and action can often annul or modify even past *karma*. It is only certain past effects, strong *utkatha karma* that are non-modifiable.

But even this and fate as a whole can be modified by the Grace of God. If you are ego and lust, gravitation pulls you downward; if you lose ego and lust gradually Grace pulls you upwards to the super conscious plane. This is the principle of Grace. One can lose ego and lust only when all attachments, aversions which cause delusion, disturbances, and disquiet of the mind cease. And this can be done through self-control; for a scattered mind pulled hither and thither by desire cannot be controlled. Grace blossoms in a pure mind, free from worldly bondage and desire. The, Purer the mind, the easier it is to control and when purity of mind comes cessation of thought comes spontaneously. Then mind becomes calm, undisturbed and it experiences superconscious bliss.

In the superconscious, one becomes identical with the Divine and becomes free. It is even supposed to give the power to annul *karma*. In the superconscious plane one experiences the oneness and the unity of creation, which is invisible to the normal turbulent mind and intellect. Sankara says "*Brahman* is real, the world is illusory and the individual soul is *Brahman* itself and no other". Jesus says, "I and my Father are one".

Sri Aurobindo points out that physics has already concluded that what exists in essence is energy and all we experience is the varied formations of one single, indivisible energy in its infinite and eternal variation. Spirit is matter in intension and matter is spirit in extension. The Absolute is beyond this duality but has the capacity to be both without losing its own absoluteness.[17] It is an astonishing fact to know how much this ancient doctrine is in perfect consonance with the latest findings of Schrodinger, "Consciousness is never experienced in the plural, only in the singular. Consciousness is singular of which the plural is unknown, there is the only thing and that what seems to be plurality is only a series of different aspects of the one thing produced by deception".[18] This is akin to the Indian teachings on *Maya*, a term denoting cosmic ignorance which obscures Reality and conjures up the universe of multiplicity. From these teachings we can learn, that Reality is one

and hence existence in reality is monistic and not pluralistic. History too is the product of this monistic Reality and its plurality appears to be a deception.

Thus the experience of the super-consciousness reveals the presence of the Divine Power. Even scientists confirm this. Sir James Jeans in *The Mysterious Universe* (p.138) says: "Today there is a wide measure of agreement that the stream of knowledge is leading towards a non-mechanical reality; the universe looks more like a great thought than like a great machine ..... we hail it (Reality) as the creation and the governor of the realm of matter ..... The universe shows the evidence of a designing or controlling power". Long ago *Brahma Vidya* or metaphysical knowledge of *Gita* teaches that this universe is not a chance product of any kind of chaos but has a mysterious presence governing at every stage. And this Divine power functions as monistic consciousness.

The experience of the superconscious also reveals that on that plane there is a preponderance of *Sattva*, infact such an experience transcend *Sattva* and infact all the three *gunas*. Superconscious also reveals the source and designer of *karma*, Grace and all the other incomprehensibles. Infact it reveals *that the source of creation is the* Divine and the Divine reveals Himself to us in three ways, within ourselves, *above our plane and around us in* the universe. This Divine is the all originating spirit, the source, sanction, material, *efficient* power, master of all activities. The action of a Buddha or a Jesus, infact all egoless *selfless* action, *love* for humanity, sorrow for the helpless all originate from this divine psychic-plane of consciousness. The psychic is the divine element in the individual being, which comes from, and keeps in touch with, the Divine. Infact all higher improvements in us originate from this plane and history relating to these could be described as psychic history.

Even then, to the normal men with scattered minds this Divine monistic Reality is invisible and even incomprehensible. In them mind creates plural objects and plural consciousness, as normally seen by us and arranges time to serve a similar purpose relating to events which happen to us. This is because mind is the lamp of the Light and not Light itself. Goethe says, "It is not given to us to grasp the truth, which is identical with the divine directly. We perceive it only in reflection, in example and symbol, in singular and related appearances. It meets as a kind of life which is incomprehensible to us, yet we cannot free ourselves from the desire to comprehend it".

Yes, like Goethe, we cannot free ourselves from the desire to *comprehend* the Divine, whose presence we normal men infer, smell and guess, especially when we experience *intuition*, higher and nobler actions and their effects and the contingent and unexpected twists *and turns and these point* upto the psychic springs of actions also as sources of history. Infact History *would be enriched if studied* simultaneously as psychi-psycho-autonomous history. Psychic history would, as *already pointed out*, enable us to study about higher *Sattva guna* actions and about the Divine. Psycho-history *would help* us to understand about the hide and seek game of the unconscious and sub-conscious. Autono-

mous history would throw clarity on all those conscious actions flowing from free will. It is autonomous because this free-will is invisibly influenced and limited to a certain extent by *karma*, by the subconscious and the unconscious and by Grace. These psychic, psycho, autonomous sources together weave actions and influence historical events and such a comprehensive history could be described as a holistic or psychic-psycho-autonomous history. And this psychic psycho-autonomous history, with concealed mysteries thus leads us to a holistic or monistic-pluralistic vision of History. To the egoless, Reality is monistic, to the egoes it is pluralistic, hence it is holistic, embracing both the visible and invisible sources and sanctions of actions. The play of the plural is a conscious and unconscious mental, egoistic, subjective reality and the omnipresence of the singular, monistic Energy is an elusive, mysterious, egoless, no mind or silent mind's objective Divine Reality, as experienced by the Sages and as inferred by some scientists. Hence History is a reflection of this holistic Reality.

The same divine life runs through and through all creation and Man is this divine heritage. There is only one Power, one intelligence, one mind, which is God and our mind (mental sour-force) is nothing but a reflex of that. Mind, when it becomes united with the universal Mind through one pointed striving attains a state of complete illumination and one gains access everywhere from the atom to the infinite. Jesus Christ says, "If, therefore, thine eye be single, thy whole body shall be full of Light". Chuang-Tzu advises, "Keep your body under proper control, your gaze concentrated upon one, and the peace of God will descend upon you". By concentration one obtains stability of the mind, and concentration is the secret of the strength in war, in trade in short in all the management of human affairs. History is thus the offspring of thoughts and concentrated thought. It teaches us to guard our thoughts because peace is the outcome of such an endeavour. Hence as a search light of infinite power History has unlimited scope.

To sum up, History springs from, fades and vanishes into and resurrects non-stop spontaneously with unbroken continuity from the mysterious holistic monistic Reality God and in between it flowers and matures as the dreams of the unconscious and conscious, as the clarity of the superconscious, as the actions and interactions of plural life force and consciousness, but its visible vital moulding energy and signal beacon lights are geography, the magnifying macro ideas and actions of significant Actors, and the environment of the masses, which jointly and simultaneously compose culture and civilization.

NOTES

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3. Arthur Marwick, *The Nature of History*, (Macmillan, 1971), pp. 107-108.

4. Bhagwan Shree Rajneesh, *Yoga the Alpha and the Omega Discourses on the Yoga Sutras of Patanjali*, (Rajneesh Foundation, India, 1976), p.13.

   Refer also Swami Vivekananda, *Meditation and its Methods*, ed. by Swami Chetananda, (Advaita Ashram, Calcutta, 1976).

5. See for example Rajneesh, *Ibid.*, pp. 13-14, 28-29.

6. Robert Jones Shafer etc. eds., *A Guide to Historical Method*, (Homewood 111., The Dorsey Press, 1969) p. 19.

7. *Gateway to History* (Revised ed. Garden city, Doubleday and Co, 1962), p. 299.

8. Quoted in Marwick, no. 3, p. 245.

9. Quoted in A.L.Rowse, *The Use of History* (The English Universities Press Ltd., London, E.C.I., 1963), pp. 175-176.

10. These 39 dynasties to whom the 440 rulers belong are - (1) The Magadha empire, (2) Sisunaga, (3) Nandas, (4) Mauryas, (5) Sangas, (6) Kanwas, (7) Andhra Satavahanas, (8) Chedi Dynasty, (9) Sakas, (10) Kushanas, (11) Guptas, (12) Hunas, (13) Vardhana Dynasty, (14) Yashovarman of Kanauj, (15) Prathiharas, (16) Gahadvalas, (17) Palas, (18) Senas, (19) Chauhans, (20) Solankis, (21) Chalukyas, (22) the Eastern Chalukyas (23) The Rashtrakutas, (24) Pallavas, (25) Cholas, (26) Slave Dynasty, (27) Khilji, (28) Tughluk, (29) Sayyids, (30) Lodis, (31) Kakatiyas, (32) Hoysalas, (33) Later Pandyas, (34) Bahmani, (35) First Sangama Dynasty, (36) Tulu Dynasty, (37) Nizamsahis, (38) The Mughals and (39) British India.

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12. See for example *The Cultural Heritage of India*, Vol.I, (The Ramakrishna Mission, Institute of Culture, Calcutta, 1975), pp. 650-651.

13. Quoted in A.L.Rowse, no.9, p. 39.

14. Quoted in Arthur Marwick, no. 3, p.183.

15. The complete works of Swami Vivekananda, A summary of it can be studied in *The Mind and its Control*, Swami Budhananda (Advaita Ashrama, Calcutta, July 1978).

    Dictionary of Sri Aurobindo's Yoga by M.P.Pandit, Sri Aurobindo Ashram, 1973), Bhagwan Rajneesh, no.4, also his other works.

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17. R.R.Diwakar, 'Aurobindo' in Donald Bishop, ed., *Indian Thought and Introduction,* (Willey Eastern Private Ltd., New Delhi, 1975), pp. 328, 333.

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Note

The effects of *Karma:* There are three kinds of *Karma* or effects of action, viz., *Prarabdha, Sancita* and *Agamya.* Prarabdha is the name for the effects of one's previous deeds, which have already begun to germinate and bear fruit in this life. *Sancita* is what is stored up for the next life. And all that are to come to fruition in future lives are classed under *Agamya.*

When the *Atman* is realized, only the *Sancita* and *Agamya* are destroyed. But *Prarabdha* still remains. It exhausts itself only by actual enjoyments and sufferings in the present life of the realized man. By virtue of this *Prarabdha,* his body continues to exist even after the attainment of *Jnana,* and falls only when the *Prarabdha* is worked out. So here, by *Karma* (i.e. effects of *Karma),* the *Upanisad* means only the last two kinds of *Karma.*

Swami Sarvananda, *Mundakopanisad* (Sri Ramakrishna Math, Madras, 1982), p. 56.

Acknowledgement

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MEGALITHS OF KONGU COUNTRY

K. Rajan

One of the dominant archaeological features noticed in South India around the Christian era was the Megalithic culture. The Megalithic culture succeeded the Chalcolithic cultures in Central India and Deccan and Neolithic cultures in Peninsular India. Especially in Tamilnadu, the impact of megalithism was deep and it played a very dominant role for a number of centuries.

The exploration conducted in the Coimbatore region, (comprising the Periyar and Coimbatore districts) has yielded a good amount of data in connection with the origin and growth of this culture. About seventy sites have been added newly to the archaeological map of the Coimbatore region (See Appendix) apart from the ones already plotted. The whole region was almost completely surveyed instead of taking a random survey to expose the cultural uniformity. There is available some fresh evidence to understand more clearly the megalithic culture.

The region has its own geographical features and importance. It is bounded by the Western Ghats and the Bhavani river on the north, the Kaveri river on the east, the Amaravati river on the south-east and the Western Ghats on the south-west. The whole region is bisected by the Noyyal river.

Location of the Megaliths

The megalithic people followed some procedures and norms while paying homage to their elders. Their graveyards were mostly located in the area where the raw material for the megalithic burial architecture was easily available. They always preferred the elevated area for the cemetries. If the nearby elevated field had been exhausted they choose the next elevated field, even if it was a little farther away, rather than selecting the nearby plain land.

The geomorphological nature of the region was so undulated that the megalithic people of the Coimbatore region never found it difficult to select a land to meet their purpose. Even though the raw material was available in plenty in the ranges of mountains, they selected only small hillocks and outcrops. The reason may be to avoid dense forests (about the big hills or hill ranges) which were not congenial to live or cultivate. They selected site for the graveyard mostly where water was easily available or accessible. In Coimbatore region seventy-five per cent of the megaliths were loca-

ted on the banks of big rivers like the Noyyal, the Bhavani etc. or near small rivulets.

Raw Materials

They utilized the raw material locally available and easily transportable. The present location of the burial ground except in a few cases clearly demonstrate that the raw materials were available within the distance of one or two kilometers. They used round boulders in the construction of the circles and slabs for the construction of cists and capstones. Both dressed and undressed slabs were used to prepare a cist whereas undressed slabs were generally used for capstones.

Distributional Pattern

The distributional pattern of the megaliths within a burial complex is assessed mainly on the basis of a few selective sites. While selecting the site for study the following two parameters were adopted. Firstly, the site should cover a wide area not less than 50 acres in extent, and secondly it should have a good number of undisturbed burials.

The region yielded a large number of sites covering an area of 10 to 100 acres containing hundreds of burials. The burial complex comprised a mixture of both small and big circles. But they have not followed any consistent pattern in the layout of the graves. Huge, unusual circles were noticed in any part of the burial complex. When a site contained more than one type of burial, each type occupied a separate portion within the complex. Topographically speaking, it seems the earliest megaliths occupied the most elevated part of the site.

A study of the density of the burials within a given space revealed the fact that the distance between two adjacent burials was normally one metre to two metres.

If the site is a habitation-cum-burial complex then the distance between the two is nearly one to two kilometers. In some cases they were closer. The burial complex was normally found on the eastern side of the habitation mound; in a few cases it was found on other sides too. If the site was situated on the bank of a river then normally the burial complex and the habitation occupied respectively the opposite banks.

The pattern of distribution that seemed to emerge from the survey was that for each locality of a 5 km. radius there was a somewhat connected cluster of sites.

Types of Burial

The burials were heterogeneous in nature: cairn circle, stone circle, circle with a menhir or standing monolithic slab at the periphery of the circle enclosing varieties of cists, urn burial and sarcophagus.

Cairn Circle

The cairn circles were constructed out of round boulders with heap of cairns at the centre. Their height above the ground depended upon the nature of the burial and the land. If the land was more flexible either the cist or urn was placed 30 to 60 cm. below the ground level and then the pit was covered and entombed with cairns. In this case

the cairns were not raised more than 50 cm. On the other hand if the working surface was hard such as that in the rocky area, they did not attempt to dig deep. They made only a small dig to get an adequate depth in which the cist could stand and thereafter it was covered with cairns and encircled by stone boulders. Since the cist projected out to a certain height normally, the cairns were also raised to one or two metres above the ground level. The diameter or the size of the cairn circle also depended upon the nature of the burial embedded in it. If the cist was a transepted one, the cairn circle had an unusual diameter. The diameter of the circle varied from 10 to 25 metres.

Stone Circle

A few sites yielded stone circles with an average diameter of 10 m. Most of the urns unearthed in this region were from stone circles only.

Urn burials were enclosed either with a capstone or an inverted bowl. They were seen with or without megalithic appendage.

Cist Burial

A major type of the burial encountered within this region is the cist burial which had four sub-types.

1. Simple cist burial constructed of four orthostats.
2. Transepted cist with single, double and multiple chambers.
3. Single transepted cist with two subsidiary cists.
4. Single cist with passage.

The cist was a box-like structure constructed of four orthostats or upright stone slabs kept in clockwise or anti-clockwise direction on a floor slab and was enclosed by a capstone. In case of transepted cist it was bifurcated laterally or longitudinally resulting in two or more chambers. If it was divided longitudinally it contained two chambers and if it was divided laterally it contained two or more than two chambers. One of the striking features was the arrangement of the multiple cists as noticed at Kodumanal. The Kodumanal site yielded three cists in a single cairn circle, one main cist at the centre and two subsidiary cists flanking an either side at the front of the main cist.

Port-Hole

Usually the port-hole was noticed on the eastern slab. In the case of transepted cist it was found on the eastern slab and on the bifurcating or the transepting slabs. There was also some variant in it. If the cist was divided breadthwise the port-hole was noticed on the eastern orthostat as well as on the other transepting slabs. If the cist was divided lengthwise then the port-hole was found on the eastern orthostat against each chamber or against right-side chamber and on the transepting slab.

Occasionally, the port-hole in the simple cist (the first port-hole in case of multiple port-holded cist) was covered with a slab on the outer side by a rectangular slab. The port-holes were usually round or trapezium in shape but in some limited cases the port-holes on the transepted slab were square.

The contents in the simple cist and the way of arrangement were different from those of transepted cist.

In longitudinal division of the cist the contents were found in the right-side chamber and the skeletal remains in the left-side chamber. In the lateral division the contents were noticed in the first chamber and skeletal remains in the second one.

There was a general pattern in the cists in the region. The northern part comprising Mettupalayam, Satyamangalam, Gobichettipalayam, Bhavani and northern part of Erode, Perundurai and Avinashi taluks had the cist divided breadthwise resulting in two or more chambers. The best example of this type could be seen at Pattakaranur in Mettupalayam taluk in Coimbatore District.

In the rest of this region both the lateral and longitudinal divisions of the cist were noticed. Interestingly, in the northern part of the region cists were constructed of thick undressed slabs having unusual size and were also covered by a huge capstone. The other parts yielded cists built of comparatively thinner slabs, which were also small in size.

The cists were found in comparatively less density in the eastern and southern parts of Coimbatore region.

Urn Burial

Urn burials were noticed throughout this region with much concentration on the eastern and south eastern parts.

The shape of the urns were uniform having a wide mouth, bulbous or globular body and truncated stem base. The rims were rolled and heavy. This was ill-fired and made of coarse red ware. It seems that the stem was fluted with the body of the urn at its bottom. A striking feature of these urns was the occurrence of two small hooks bent upward fixed on the interior surface at the shoulder of the urn. Either the hooks could have been used to hang something inside the urn or they helped to tie up the bowl enclosing the urn.

The urns were either covered with a capstone or a deep shallow bowl and in quite a few cases they were without any capstone. The urn was placed vertically, or horizontally or in a slanting position inside the pit dug into the soil. If the urn was placed in a slanting position the mouth always faced towards north. The pit engulfing this urn was either shallow or trough shaped. The trough shaped pit was used for the urn placed in a horizontal position. Normally the urn was buried 30 to 90 cm. below the ground level then it was covered with a bowl or a capstone and encircled by stones. In most of the places it was encountered without megalithic appendage. Skeletal remains were found inside the urn and a number of small pots was kept around this urn at the bottom.

Sarcophagus

Two sarcophagi unearthed by some quarry diggers at Irugur near Coimbatore are now displayed, one at the Kalaimagal Museum, Erode and another at the office of the State Archaeology Department,

Coimbatore. No other place yielded Sarcophagus. They were small trough shaped structures made of fine clay. Two rows of legs were attached at their bottom. Whether they were buried in a cist or pit has not been recorded by the finders.

Rock-cut Chamber

The exploration in this region has not yielded any rock-cut chamber. But Longhurst is said to have found one in his excavation at Sirumugai. However from the description given in his report, what he described was most probably a stone sarcophagus. Actually, it was a pit cut into the hard rock to accommodate an urn kept in a horizontal position. It was not a chamber cut into the rocky surface, it was only a pit. Nor can it be described as a stone sarcophagus as he assumed. He seems to have misled by its trough shape. So far nowhere we come across a sarcophagus accommodating an urn.

Circle with Menhirs

Apart from the usual types of megaliths some unusual types are also found in this region. The sites at Nichchampalayam, Mukkudivelanpalayam, Panchalingapuram, Kudiyampalayam, Kodumanal and Nattukkalpalayam yielded a circle with a standing monolithic slab at the periphery of the circle. The slabs are found either in singles or doubles planted on any part of the circle.

Local Name

The megaliths are called differently in different parts of the region. They are called as 'Pāṇḍiyan Mokkai' in the northern part and as 'Pāṇḍiyan Kuḻi' or 'Pāṇḍavar Kuḻi' in the central part of the region and as 'Sōḻa Kuḻi' in south-eastern part of the region. The standing monolithic slabs were known as 'Vēḍankal' and 'Sūryakal'. The cists were called as 'Pāṇḍiyan Vīḍu'. The term 'Pāṇḍiyan Kuḻi', is the word widely used in this region.



Chettipalayam (Protected site) -- Cairn



Solagangapalayam--Cairn circle



Nichchampalayam--Cairn circle in the midst of a cultivated field



Pattakaranur--Transepted cist, partly exposed



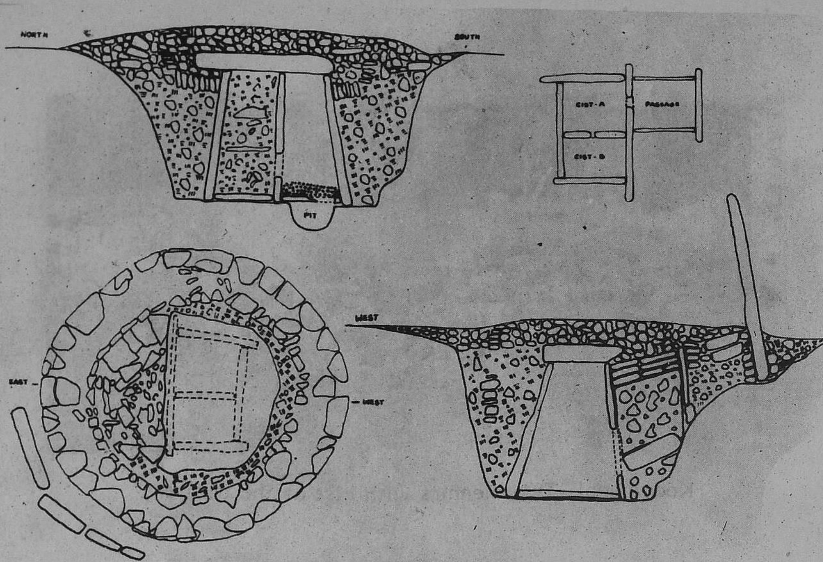
Kalimangalam--Port-hole, Partly exposed



Kodumanal--Two menhirs with cist at the centre



Panchalingapuram--A menhir with partly exposed cist in the forefront



MEG-3

Kodumanal--Ground plan and cross section of a megalith



Kodumanal--a transepted cist flanked by two subsidiary cist

APPENDIX

Classified List of the Explored Megalithic Sites in the Coimbatore Region

No.	Site	Taluk	District	Remarks
1	2	3	4	5
I. Cairn Circle				
1.	Kongamalaikādu	Coimbatore	Coimbatore	Transepted cist having three chambers.
2.	Thanikandi	"	"	Cist burial.
3.	Vellalūr	"	"	Habitation-cum-burial site. Cist burial.
4.	Vīrapāndipudūr	"	"	Transepted cist with port-hole on the east.
5.	Ottakalmandapam	"	"	Habitation-cum-burial site.
6.	Muthukaundan-pudūr	Palladam	Coimbatore	Habitation-cum-burial site. Cist having bench on the interior.
7.	Pūluvapatti	"	"	...
8.	Vannānthurai-pudūr	"	"	Habitation-cum-burial site.
9.	Chāvadipālayam	"	"	Cist burial.
10.	Muthannampālayam	"	"	"
11.	Nāchchipālayam	"	"	"
12.	Nerupperichal	"	"	Transepted cist.
13.	Kathavukarai - Amman Kōil	Avinashi	"	Cairns surrounded both by stone slabs and boulders.
14.	Kaniyampūndi	"	"	Habitation-cum-burial site.
15.	Thiruvāmudaliyūr	"	"	Cist burial.
16.	Pattakāranūr	"	"	Transepted cist with three chambers and all having port-hole.
17.	Puliyampatti	Satyamangalam	"	...

1	2	3	4	5
18.	Pachchai Amman koil	Erode	Periyar	Transepted cist with three chambers and all having port-hole.
19.	Sōḷagangapāḷayam	"	"	...
20.	Añjūr	"	"	...
21.	Pettipāḷayam	"	"	...
22.	Ponnāpuram	"	"	...
23.	Nanipāḷayam	Perundurai	"	...
24.	Nichchampāḷayam	"	"	Transepted cist.
25.	Naḍupaṭṭi	"	"	...
26.	Sircar Periya-pāḷayam	"	"	Habitation-cum-burial site.
27.	Kāḍaiyūr	Kangayam	"	...
28.	Kumārapāḷayam	"	"	...
29.	Perunthozhuvu	"	"	...
30.	Sivanmalai	"	"	...
31.	Erukkalānkāṭṭu pudūr	"	"	...
32.	Kallēri	"	"	...
33.	Agilāṇḍapuram	"	"	Habitation-cum-burial site.
34.	Mēṭṭānkāṭṭu-valasu	"	"	...
35.	Kāngayam	"	"	...
36.	Paḍiyāṇḍipāḷayam	"	"	...
37.	Kānthampāḷayam	"	"	...
38.	Thittampāḷayam	"	"	...
39.	Sivagiri	"	"	...
40.	Kāmāchipuram	"	"	...
41.	Arasampāḷayam Pirivu	"	"	...
42.	Kōvilpāḷayam	"	"	...

1	2	3	4	5
II. Cairn Circle with Menhir				
43.	Nāṭṭukkalpāḷayam	Pollachi	Coimbatore	Menhirs planted on the periphery of the circle.
44.	Mukkuḍivēḷan-pāḷayam	Erode	Periyar	Two huge monolithic slabs planted on the western side of the circle.
45.	Panchalinga-puram	"	"	Two menhirs planted opposite to each other.
46.	Broughnagar	Perundurai	"	...
47.	Koḍumaṇal	"	"	Habitation-cum-burial site.
III. Cairn Circle/Stone Circle				
48.	Kaḷimangalam	Coimbatore	Coimbatore	Cairn circle having transepted cist with port-hole on the east. Stone circle with urn burial..
49.	Kāliyāpuram	Pollachi	Coimbatore	Huge transepted cist with port-hole on the east.
50.	Iḍayapāḷayam	Palladam	"	Habitation-cum-burial site.
51.	Kañjapaḷḷi	Avinashi	"	"
52.	Mangalakarai-pudūr	Mettupalayam	"	Cairn circle entombing transepted cist and Stone circle entombing urn.
53.	Sirumugai	"	"	"
54.	Kaliyappanūr	"	"	"
55.	Sivagiri Ammankoil	Erode	Periyar	"
56.	Eḻutingaḷpaṭṭi	Perundurai	"	...
57.	Cheñjēripāḷayam	"	"	...
58.	Kāsilingapāḷayam	Dharapuram	"	...
59.	Ayyappanāickan-pāḷayam	"	"	Habitation-cum-burial site.
60.	Sālaiyūr	"	"	...
61.	Akkaraipāḷayam	"	"	...
62.	Piramiyam	"	"	...

1	2	3	4	5
63.	Kampilipaṭṭi	Dharapuram	Periyar	Habitation-cum-burial site.
64.	Thāyampāḷayam	"	"	...
65.	Iḍaikāḍu	"	"	...
IV. Urn Burial				
66.	Nallūr vayal	Coimbatore	Coimbatore	Urn burial enclosed with a capstone.
67.	Kāḷāpatti	"	"	Habitation-cum-burial site. Urn having two hooks on the interior at the shoulder portion.
68.	Thattūr	Pollachi	"	A unique graffito  on the exterior surface of the shoulder portion.
69.	Erode	Erode	Periyar	...
70.	Moolakarai	"	"	...
71.	Koḍuvāy	Kangayam	"	...
V. Cairns				
72.	Kaḷḷapāḷayam	Coimbatore	Coimbatore	Huge cairn mound.
73.	Kaṉuvāikarai	Satyamangalam	"	...
VI. Sarcophagus				
74.	Irugūr	Coimbatore	Coimbatore	The legs are fixed in two rows. Habitation-cum-burial site.
VII. Cist Burial				
75.	Māvūthampati	Coimbatore	Coimbatore	Round port-hole on the east.
76.	Ānaimalai	Pollachi	"	Transepted cist.
77.	Ambarampāḷayam	"	"	"
78.	Ellapāḷayam	Avinashi	"	Simple cist.
79.	Thaṭṭapaḷḷam	Mettupalayam	"	Transepted cist.

ARCHAEOLOGICAL EXCAVATIONS IN KANCHIPURAM

K. V. Raman

Introduction

Kanchipuram (Kanchi for short) the historic capital city of the South, rich in ancient monuments and inscriptions, glorified in ancient Tamil and Sanskrit literature, eulogised by the Chinese traveller Yuan Chuang (7th century A.D.), the seat of capital of Tondaiman Ilam Tiraiyan of the Sangam period (2nd century A.D.) and later of the long line of the illustrious Pallava kings has been holding attention of the archaeologists, historians, epigraphists, art connoisseurs for a long time and still its historical wealth has not been fully probed. Every turn of the spade in the vicinity of Kanchi has brought forth new materials throwing fresh light on some aspect of the ancient city and its variegated historical associations. Yet, the excavation in the city bristles with difficulties. Unlike many of the ancient cities of North, there are no well-marked deserted mounds for unhindered excavation; on the other hand, considerable portion of the ancient city has been in continuous occupation in successive ages right up to the present day. The nucleus of the ancient city, *viz.* the present Big Kanchipuram area -- including the area enclosed by the Vaikuṇṭa Perumāḷ Temple on the east and the Kailāsanātha Temple on the west and Yadōktakāri (Tiruveḥkā) temple on the south and particularly the main hub centering round the *Rāja-vīdhi* (King's Way) and Kamakshi Amman Temple -- is under continuous occupation full of modern structures and houses hardly leaving space for any large scale excavation. The archaeologists had often to dig in the vacant space in the backyards of private houses or in the temple or school compounds wherever plain areas are available.

It is not surprising that three agencies have evinced interest in undertaking excavations in the city of Kanchi at various times. In 1954 and 1962 the Arachaeological Survey of India, Southern Circle, Madras undertook small-scale excavations in Palimedu and Big Kanchipuram respectively. Again in 1975 the Department of Archaeology, Government of Tamil Nadu laid a trench in Palimedu. But the major effort was undertaken by the Department of Ancient History and Archaeology, University of Madras which excavated between 1970 and 1976 as many as 17 trenches distributed in five different parts of Kanchipuram. The accompanying table showing the places excavated by all the three agencies would show how archaeological probing has on the whole covered many of the ancient parts of the

city and would serve to furnish a cross section of the cultural deposits that have accumulated in the area through the ages.

Habitational Deposits

Of the areas excavated it is the vicinity of Kamakshi Amman temple that has yielded the maximum accumulation of cultural deposit. This area as well as the Sankara Mutt premises together seem to form the hub of the city. The habitation deposit starts right on the natural soil/rock, i.e., sandstone at the average depth of about 5 to 7 metres from the present ground level (Raja street). The following data regarding the thickness of the habitation deposit would give a fairly good idea of the comparative incidence and continuity of occupation in different parts of the city:-

Trench No. (1)	**Location** (2)	**Depth in M** (3)	**Remarks** (4)
1.	Ulagaḷanda Perumāḷ Sannidhi St. (Near Kamakshi Temple)	6.30	Periods I, I-A, I-B, II, III. Period I-A: Black-and-Red ware, Black-and-Red painted and russet coated painted ware. Period I-B: Black-and-Red continues. Painted wares also continue. Roman wares - Rouletted, Amphorae, etc. Period II: Red slipped ware, Bright slipped ware, Brown slipped ware, dull red ware. Period III: Coarse red ware, dull red ware with red slipped ware. A square structure of brick construction in IB (Buddhist origin ?). Grey ware sherd (bowl) with Brahmi legend ascribable to 2nd century A.D. A large deposit of charcoal in the lowest level which gave C-14 date of 480 B.C.
2 and 2-A	Pāṇḍava Perumāḷ Sannidhi St. (Near Ēkāmbarēśwara Tempe)	5.40	Periods IB, II and III. A circular structure above the natural

(1)	(2)	(3)	(4)
			soil. Ring well in period II. A row of conical jars (local amphorae) in period II (KCM-2A).
3.	Pāṇḍava Perumāḷ Sannidhi St. (Near Ekambareswara Temple)	5.40	Periods IB, II and III. A terracotta coin mould from period II.
4.	Ulagaḷanda Perumāḷ Sannidhi St.	6.00 M	Periods IA, IB, II and III. A massive brick structure in the lowest level which could have been the remains of a stupa. Ring well in period II. A number of terracotta human beads with elaborate head dress portraying the figures of chieftains from period IB and III. Charcoal samples yield C-14 date of 235 B.C.
5.	Golla chatram (Near Kamakshi Temple)	5.80 M	Periods IA, IB, II and III. Coin moulds bearing Ujjain symbol, elephant and bull presumably of Satavahana age from later levels of period IA. A toy antilope from deposits of IA.
6.	- do -	- do -	Periods IA, IB, II and III. Terracotta human heads with headdress coin moulds, amulets depicting double fish and a corroded copper from later levels.
7.	Nimanthakāra St. (Near Jvarāhārēśvara Temple)	2.70 M	Period II only. The site was very much disturbed.

(1)	(2)	(3)	(4)
8.	Hospital Road (Near Vaikuntha Perumal Temple)	3.70 M	Periods II and III only. In the lowest levels of period II amphorae pieces are found in large numbers. A significant yield of this and the neighbouring trench No.9 are human and animal figurines in large numbers made of stucco. Male and female figurines are more in number compared to the animal figurines.
9.	- do -	3.00 M	In early layers human and animal figurines made of stucco occur. Male heads and female busts are proportionately larger in number. A bone object depicting the srivatsa symbol was gound in layer (9) the lowest level of period II. Another find is a terracotta medallion with a figure of an elephant on it.
10.	Chokkīśvara Temple (Near Kamakshi Temple)	5.40 M	Periods IA, IB, II and III. The earlier two phases are characterised by beads made of glass, paste and terracotta, glass, shell, bangle pieces and glass ear studs. Terracotta human heads, ear ornaments; glass, paste and terracotta beads and a coin mould depicting a bull, a snake and a crescent symbol in period II. Period III yielded terracotta toy heads and bangle pieces.
11.	Opposite to Sarva Tirtham	2.70 M	Periods II and III. No significant antiquity except glass beads and bangle pieces and terracotta human head.
12.	Pachiyappa's High School Ground	2.85 M	Only later phases were available. Terracotta human head and torso, glass and paste

(1)	(2)	(3)	(4)
			beads from II. Terracotta amulets, terracotta beads etc. from III.
13.	Taluk Office compound (in the heart of the city)	3.90 M	Only later phases were noticed. A good number of terracotta human figurines from II, besides glass, paste shell and terracotta beads. Period III yielded a number of terracotta amulets.
14.	Ulagaḷanda Perumāl Sannidhi St.	5.80 M	Deposits of period IA, IB, II and III were available. Period IA: Tiny glass beads, shell beads, etc. A mud wall in the earliest period. Period IB: Glass and shell beads and bangle pieces. Period II: beads of semi-precious stones, glass bangles and beads, bone arrow heads. Period III: Glass studs, beads, semi-precious stone beads etc.
15.	Subbarāya High School Ground (Near Kamakshi Temple)	5.10	Periods IA, IB, II and III. Period IA. Beads (glass, shell and paste) glass and shell bangle pieces. Period IB: Besides beads of shell, glass and paste, terracotta coin-moulds belonging to the Satavahana period. Period II: Bone arrow heads, terracotta human and animal figurines, glass stud, etc. Period III: Beads and bangle of glass, studs, etc.

(1)	(2)	(3)	(4)
16.	Varadarāja Perumāḷ Temple (in the Kanchipuram)	4.50	Periods II and III only.
			Period II: Terracotta beads, glass and shell beads.
			Period III: Copper coin of Cola period, glass and shell, terracotta beads.
17.	- do -	3.70	Periods II and III. No significant antiquity.
			In period III a Vijayanagara gold coin with Hanuman on one side.
18.	Subbaraya High School Ground (Near Kamakshi Temple)	5.40	Periods IA, IB, II and III.
			Period IA - glass and shell beads, glass studs, terracotta gamesmen, bone styles etc.
			Period IB: Beads of semi-precious stones, glass and paste beads.
			Period II: Beads of glass and semi-precious stones and terracotta ear ornaments.
			Period III: Glass and shell beads and bangles, terracotta hopscotch etc.

Nucleating Zone

The area like Attiyūr (the vicinity of Sri Varadarajaswami Temple on the south), and the arèa west of Ekambaresvara temple have comparatively thinner habitational deposits indicating the peripheral nature of the occupation. The nucleating area was certainly the so-called Big Kanchipuram which has the maximum concentration of ancient temples. The mose elevated zone of this area is the mound on which the Kamakshi Amman temple, Kumarakottam, Ulagalanda Perumal Temple are situated. The Vaikuntha Perumal Temple on the east and the Kailasanatha Temple on the west -- both of the Pallava period -- seem to mark the outer periphery of the city limits in the Pallava times. The orientation of the temples here in this vicinity is also significant. They are all oriented towards the central hub, as it were, where probably the Pallava palace was situated. All the major temples

in Big Kanchipuram look towards the central hub. The Kailasanatha, Ekambareswarar, Vaikunta Perumal, Airavateswara, Piravatanesvara, jvaraharesvara, Muktesvarar and Matangesvara temples are all looking from the central hub even going against the normal conventions for temples to face east. Many of the temples seem to be line as it were all along the four main thoroughfares forming the square plan. Another significant mound is in the vicinity of the ancient Pādagam (Pāndava-thūtha Viṣnu temple). The area between the Raja street and the Padagam temple is a conspicuous elevation. Here the area excavated in the backyard of the Sankara Mutt falls in this mound and it has yielded about 6 metres thick of habitation deposit standing from the natural rock. The antiquity of the earlier occupation goes back at least to the beginning of the Christian era and possibly a few centuries earlier.

Peripheral Suburbs and Their Layout

Another important feature of the layout of Kanchi city is that besides the nucleating area described above, there were many smaller peripheral satellite villages or habitation units self-sufficient in themselves and having their individual names but integrated loosely with the Kanchi city in subsequent times. Thus for example, the area now known as Viṣnu-Kanchi was for a long time known in ancient records as only Attiyur and Lord Varadaraja the presiding deity is mentioned as the Lord of Attiyur *(Attiyūr ninraruḷiya pērambalam).* It is almost an independent unit with two *mada* streets (on the sides of the temple) and the two *Sannidhi* streets i.e. streets in front of the two entrances on the east and west. Similarly the complex of streets around Yadoktakari temple was known as Tiruvehkā in ancient records, the quarters around pandavathutha Perumal temple is mentioned as the village of Padagam. All these have later on been integrated into the Greater Kanchi city. In the inscriptions of these temples as well as ancient literature the quarters like Attiyur, Tiruvehka, Padagam are mentioned without even reference to Kanchi city. This would indicate that Kanchi city was originally limited in its extent but later on during the Cola and Vijayanagar times began to include the peripheral small settlements.

Though Kanchi city owed much of its greatness and fame to the Pallavas who at their peak flourished for nearly 300 years with Kanchi as their capital (c. A.D. 550-850), it was an important city even during the earlier times. Its political and religious importance is known from the early Tamil works like the Perumbanarrupadai which describes the city as the capital of Tondaiman Ilamtiraiyan, a contemporary chieftain of Karikala Cola (c.150 A.D.). He was also a contemporary of Satiyaputra Adiyaman Neduman Anji whose inscription dated to 2nd century A.D. has been recently discovered at a place called Jambai in South Arcot Dist. The Tamil work describes the city as a centre of many faiths and mentions Ilam Tiraiyan as devotee of Visnu. The Tamil epic *Maṇimēkhalai* mentions a celebrated Buddha *Vihāra* at Kanchi. The Chinese pilgrim, Yuan Chuang who visited Kanchi in the 7th century A.D. mentions the presence of many Buddhist monasteries and *stupas.*

Sequence of Cultures Revealed by Excavations

I & II Phases

The several trenches laid in

different parts of Kanchi described below in detail, have brought to light the continuous occupation of the city from atleast 300 B.C. The earliest period of occupation of Kanchi city can be associated to the well known and distinctive Black-and-Red pottery associated with the widespread Megalithic culture of South India. The occurrence of this pottery has been noticed at the earliest level in the trench near the Sankara Mutt, and also the vicinity of the present Kanchi temple. This would show that occupation of that period was quite widespread in the vicinity of the present Kanchi city, particularly in its nuclear zone. This period may be assigned to around 4th to 3rd century B.C. especially because we see in its upper levels the presence of the potteries of the first centuries B.C./A.D. like the Rouletted ware.

The next phase (IB) can be ascribed to the early centuries of Christian era on the basis of the availability of the datable ceramics like the Russet-coated ware, Rouletted ware, amphorae and also inscribed pottery. The presence of the Satavahana coins of the 2nd century A.D. at this level in one of the sites would confirm the date of this level.

III Phase

The third phase of the cultural sequence can be linked to the Pallava period which was an important phase for the development of Kanchi as a political capital and as a centre of the significant religious movement. It was this period which probably witnessed the formation of the main layout of the city as we know it today but much limited in area. It was probably a fortified town, the vestiges of which we are able to see near the Palimedu. Important temples like the Kailasanatha, Vaikunta Perumal and a host of other Pallava temples were built during this period, i.e. in the 7th, 8th and 9th centuries A.D. Almost all of these are found concentrated around Big Kanchipuram. In excavations evidences of Pallava coinage and other objects like the terracotta were found.

IV Phase

The fourth phase can be associated with the period of the imperial Cōḻas (c. 900-1300 A.D.). Though the political importance had shifted from Kanchi to the new capital Thanjavur in the Kaveri basin, kanchi continued to hold its own as an important secondary capital because of its strategic situation. It was more or less at the entry point for all the northern and eastern powers to have access into Tamilnadu and hence the Cōḻas took extra care to guard it. In fact, there was a palace at Kanchi even during the Cōḻa times which they kept and used as a secondary seat of power. It was during this period there was an expansion in the religious rituals and buildings. There are a number of Cōḻa additions to the older temples besides the construction of new ones. For example, the Chokkīśvara temple, Jvaraharesvara temple, the sanctum complex of the Padagam, the sanctum complex of Varadarajaswami temple, etc. More than a hundred inscriptions belonging to the Cōḻa kings have been found in the temples of Kanchi mentioning several grants of the Cōḻa military generals like Karunakara Tondaiman, Naralōkavīra (12th Century A.D.) and others. The excavations yielded a number of Cōḻa coins especially of Rajaraja I and his succes-

sors clearly attesting to the Cōḻa hold on the city. We have also recovered a number of interesting terracotta art and cult objects, houshold or domestic objects like the bangles, beads, gamesmen, etc. which throw much welcome light on the life style of the commonfolk.

V Phase

The period between 1250 and 1350 A.D. was a period of disturbance and instability for Kanchi city as indeed it was for the rest of the Tamil country. The decline and fall of the Cola power created a political void which was ought to be filled in by several rival chieftains. Inscriptions of Kanchi temples reflect this period of confusion very well and we see several chieftains like the Telugu Cōḻas, Sambuvarāyas, Kāḍavarāyas, claiming the possession of Kanchi. Outside powers like the Hoysalas and the Kākatiyas also tried to fish in the troubled waters. In 1310, Kanchi was raided by Malik Kafur's forces and Kanchi had to face the brunt of his plundering raids. Temples like the Kailāsanātha temple had to face closure and stoppage of *pūjas*.

It was only from the later half of the 14th century a new and expansive phase in the life of Kanchi started with the expansion of the Vijayanagar empire. This was a period marked by unprecedented building activity. Stately towers, ornate 100-pillared *maṇḍapas* and beautiful subshrines were built to match the tremendous elaboration of the festivals and fairs -- all these reflected in the contemporary sculptures and inscriptions. Kanchi became an important pilgrim centre for the entire South India which status it continues to hold even today. This Vijayanagara phase is also well reflected in the excavations by the presence of a number of Vijayanagar coins and other objects.

VI Phase

This place which is post-Vijayanagara and can be termed as modern is attested to by the presence of a number of modern coins and ceramics.

Antiquities

The excavations at Kanchipuram yielded quite interesting antiquities which play a major role in fixing the chronology of the site. The antiquities consist mainly of glass and shell objects, terracotta objects and things made of stone, bone, iron, copper, etc.

Shell Objects

Fragments of bangles, rings, beads and some unidentified objects belong to this group. Majority of them come from period III deposits and a few are from period II. Bangles found in large number were of two varieties, plain and decorated. Most of the decorated pieces were painted with red ochre. Beads were also found in large numbers. While the barrel-shaped beads come from the later periods, the corn-shaped thin-sectioned beads were encountered only in the lowest levels.

Glass Objects

Bangles, beads and studs of various sizes are the objects made of glass. Glass bangles which were found in large number appear in the later periods. Plain and decorated bangle pieces occur both in period II and III. Tiny beads were collected

in large number from period IA and IB. Beads slightly bigger in size were found from II and III. Their shapes include cylinderical, ovate, barrel, spherical, biconical, facetted, segmented and collared.

Paste Beads

Beads made of paste in various colours were found from the deposits of all the three periods at Kanchipuram. Their shapes confine to barrel, spherical and tubular.

Stone Objects

Stone objects from Kanchipuram include dabber probably used by potters, stone marbles, spherical stones, etc. Their occurrence is noticed only in periods II and III.

Beads of Semi-precious Stones

Semi-precious stones formed an important material for making beads and other objects. The variety of semi-precious stones include crystal, amethyst, jasper, agate and carnelian. Beads made of these materials occur mostly in the later periods. Garnet and beryl were also used for making beads. The occurrence of unfinished beads and lumps of raw materials would indicate the flourishing industry of bead making at the site. Different shapes of beads such as cylindrical, spherical, ovoid, and barrel have been encountered which speaks of the taste of the people. Soapstone was another material which was used for making beads.

Bone Objects

Objects made of bone are very interesting although occurring in a small number. Among the notable ones are (1) a beautiful *srivatsa* symbol, (2) a comb with the lower portion decorated and serving a handle, (3) a long rod, perhaps used as collyrium stick and (4) a crudely shaped *srivatsa* seated on pedestal. These have been found in period II and III.

Metal Objects

Iron and copper objects occurred in periods II and III. Copper objects include rings, antimony rods and broken pieces.

Among the objects made of iron, mention may be made of knife blades, sickle, arrow head, styles, nails, knobs, fish hooks etc.

Terracotta Objects

Terracotta objects belonging to different varieties were found. Their number and variety indicated the antiquity and the interest shown by the people in the artistic manufacture of the object. The objects consisted of human and animal figurines, toy objects, ear ornaments, medallion, gamesmen, spindle whorls, amulets and coin moulds and terracotta heads. These objects come from the late levels of period IB, period II and III. A large number of objects are devoid of slip but micaceous paint is seen on one or two specimens. They are handmade as well as moulded figures.

Male Heads

A number of male heads were encountered in the excavations portraying different type of headdress. Two male heads show elaborate head gear. The figures are well proportioned with prominent eyes, nose, chin and lips. The headdress

consists of plaited turban surmounted by a fan-like plum above. Another has a more pronounced headdress arranged in the form of decorated coiffure. The folds of the turban have been brought out clearly. All these appear to be the figures of chieftains. Another group of the male heads show decorated hair style a little cruder in formation than the previous group. Male torsos in sitting posture present a crude representation of the figures. A few male ascetic figures have also been noted.

Female Figurines

Like the male figurines the female figurines have also been found mutilated. The heads bear beutifully decorated coiffure in different styles. The hairdo have been shown in appliqaue as well as in linear forms. A circular pellet has been applied on the forehead to depict the vermillion worn by the ladies on their forehead. Of the female torsos found some are the pieces retaining the belly hip and thigh portions and others the bust portion. The former ones depict double-tier or triple-tier pearl rows as girdle and the latter ones have varieties of ornaments on their body. A hand portion of a divinity showing *abhaya hasta* has decorative ornaments.

Animal Figurines

A few animal figurines have been encountered during the excavation which were all fragmentary in nature. The animals like elephant, dog, mouse, etc. have been represented. Among the terracotta objects two distinct types have been noticed. The objects found near the Kamakshi Amman temple, Ekambaresvara temple in Big Kanchipuram and in the Varadaraja Perumal temple in little Kanchipuram are made of ordinary clay and have terracotta colour after firing. But those found in trenches KCM-8 and KCM-9 both laid in one camp near the Vaikuntha Perumal temple present a different picture. These objects comprising of elephants, mouse, human heads and fragments forming the other parts of the body are made of stucco which has not been fully baked and hence remain white. Another peculiar feature is that these figures have hollow inside as against full solid figures of the other group.

Srivatsa

An object depicting the *srivatsa* symbol formed of protruding pellets on one side and plain other side is an interesting antiquity from period II. Though outwardly crude in formation it looks beautiful.

Amulets

Number of terracotta amulets have been recovered from the digging. The amulets are formed of lotus flower with petals individually shown, decorative scrolls, areca-nut, tortoise, single fish and dobule fish. Each one has been delicately decorated and a hole is bored through the amulet evidently to pass a thread though it so that the amulet can be tied in the body. These occur in period II and III.

Coin Moulds

A few coin moulds have been found. These belong to the late levels of period IB and early levels of period II and period III. The depiction of elephant, bull, Ujjain symbol and Brahmi letters clearly indicate that these have come from the Sata-

vahana levels. However their fragmentary nature does not give a full picture. The coin moulds of the later periods are those of the copper coins of the Cola period.

Discs

Several circular discs have been recovered from the deposits of period II and III. They are made of postherds. Some of them are pierced at the centre and the majority are unpierced. The pierced ones could have been used as wheels for the toy carts and the unpierced could have been used as hopscotches.

Conical Pieces

Few conical pieces made of black slipped pottery were found in the excavation. Some have a hollow inside and were broken at the bottom. Others have a flat bottom and pointed top which could have been used as gamesmen.

Apart from these terracotta objects a large number of terracotta heads were recovered from different phases. They are larger in period II and III. Most of them were devoid of slip though a few show a wash. The shapes include a small number of globular and the rest arecanut-shaped, the latter being very common throughout period III.

THE FUTURE OF ARCHAEOLOGY IN TAMIL NADU*

Y. Subbarayalu

Archaeology is concerned with the study of the entire human past using the material evidence that has survived the ravages of time. Even though archaeology is usually equated with 'prehistory' it has a lot to contribute to the clarification of historical period also. This paper first reviews briefly the studies undertaken till now in the prehistoric as well as historical archaeology of Tamil Nadu, then highlights some of the unsolved problems and considers future mode of action to solve these problems. It must be clarified at the outset that the archaeology of Tamil Nadu cannot be studied in isolation as otherwise we would be making the mistake of treating it as a *cul-de-sac*.

Archaeological research in India started more than a hundred years ago. Thanks to the efforts of various Institutions and individuals during this long period, particularly during the last five decades, a fair outline of the Indian prehistory is now available. But still there are a number of gaps in the picture. One major reason for this deficiency is that the publication of the results of most field works had been much delayed with the result that no proper feedback of new information tookplace, hampering further active research.

In 1944 the first scientific excavation of a site in Tamil Nadu i.e., Arikamēḍu near Pondicherry, was undertaken by the Archaeological Survey of India (hereafter abbreviated as A.S.I.) and the results were published within a couple of years. But many other excavations undertaken subsequently by the A.S.I. have not been reported fully, though some information has been disseminated through a few sporadic articles. In addition to the A.S.I., the Department of Ancient History and Archaeology of the University of Madras and the Tamil Nadu State Department of Archaeology have been continuously undertaking archaeological field work for the last two decades. Altogether about thirty-five sites have been excavated during the last four decades and among these are included such important sites as Guḍiyam, Paiyampaḷḷi, Kāvirippūmpaṭṭinam, Kāñchipuram, Koṟkai, Karūr, Uṟaiyūr, etc. Full reports have been published so far only for seven of the excavated sites.

Some Districts have been intensively explored by the A.S.I. for fixing up the ancient sites: Pudukkōṭṭai, Chingleput, Madurai, Coimbatore, Dharmapuri and parts of the North Ārcoṭ District. This and the exploratory works of the Madras University Department and the State Department have

*Inaugural Lecture: Archaeology Chair.

brought to light a large number of ancient sites, some of them having good archaeological potential. Here again comparing notes is difficult as detailed reports of the above explanations are not available.

Eventhough full data were not published, some scholars were simultaneously interpreting and making some synthesis of the available material.[1] The first thought-provoking article was written by an anthropologist, C. von Furer Haimendorf (1953) who initiated the debate about the possible Drāvidian authorship of the iron-using megalithic culture. The first serious treatment of the new archaeological discoveries by a historian is the one found in K.A. Nilakanta Sastri's *A History of South India* (1955).[2] T. Balakrishnan Nair who contributed the relevant chapter to this book made a neat and succinct up-to-date summary of the 'earliest peoples and cultures' of South India. After this, many works on Indian or South Indian archaeology in general have included discussion relating to Tamil Nadu (Subba Rao 1958, Sankalgia 1963, Banerjee 1965, Allchin & Raymond 1968, Gururaja Rao 1972). Recently two works were published by B. Narasimhaiah (1980) and K.S.Ramachandran (1980) specially devoted to Tamil Nadu. And there is a good chapter in the book by K.K. Pillay (1975).

The knowledge accumulated so far from all these works may be summarised as follows. Our understanding of the earliest stage, i.e., the Palaeolithic stage, is still very much limited. No progress has been made beyond the typology of the stone tools picked up in thousands in Attirampākkam and other places in the Chingleput District. The pioneer works of V.D. Krishnaswamy, De Terra and Paterson have not been improved upon so far. The excavations conducted by the A.S.I. at Dudiyam and other nearby places in the Chingleput District should provide a large volume of data if and when the results are published. One thing seems to be certain. That is, the Palaeolithic culturlal material are found only in the Chingleput District. But the Mesolithic/Microlithic tools are available in this District as well as in the coastal tracts of the Tirunelvēli District and in some other localities. Some new information has accumulated about this stage since it was first studied by F.E. Zeuner and Bridget Allchin (Allchin 1966). Recently some work has been done on the Tirunelvēli sites by the archaeologists of the Deccan College (Joshi *et al.* 1980). The most important finding that has

1. The earliest book relating to the archaeology of Tamil Nadu is that of P.T. Srinivasa Iyengar (1926). It must be said that when such works were written the serious study of Indian prehistory had hardly begun. Even after serious work had started some very out-dated books were published. e.g., V.R. Ramachandra Dikshitar (1951).

2. This book was actually completed in 1949 but was published only in 1955.

emerged from these studies is that there exists close similarity between the microlithic tools of the Tirunelvēli and Kerala coasts and those of Śrī Laṅkā.

As for the next stage, the Neolithic stage, more information has been collected since the work started in the 1940's. In the present state of research the Neolithic culture seems to be confined to the Districts of Dharmapuri and North Arcot i.e., to the northern part of Tamil Nadu abutting Karnāṭaka. The impression may change if further work is done as a number of surface finds of Neolithic celts is reported from other Districts also. But habitation and factory sites have been found only in the northern Districts. Paiyampaḷḷi in the North Ārcoṭ District was excavated by the A.S.I. and some section-scraping study of three other sites in the Dharmapuri District was undertaken by Narasimhaiah. While the Paiyampaḷḷi excavation is not yet fully reported, the painstaking study of Narasimhaiah (1980) is significant in that it has tried to make a comparison of the Dharmapuri material with that found in Nāgārjunakoṇḍa in Andhra Pradesh and in the Karnāṭaka sites and by this he has put forth a number of hypotheses to work upon further. According to him there are three Neolithic phases and a pre-pottery Neolithic phase. The excavation at Paiyampaḷḷi has provided a few radiocarbon dates for the Neolithic phase of that site and on typological basis Narasimhaiah dates his three Neolithic phases from c.2800 B.C. This dating has to be confirmed by future researches.

The Neolithic Age was succeeded directly by the Iron Age in Tamil Nadu without the intervening Copper Age as far as othe present excavated evidence goes. Even though previously Iron Age was equated with the 'Megalithic' culture in archaeological literature, most scholars now are wary of the equation. Because the few excavations conducted in the megalithic burial sites after Independence could not clearly relate them to a nearby Iron Age (or megalithic) habitation site and *vice versa*. Independent dating of the megalithic burials to a period earlier than the 3rd century B.C. has not yet been possible whereas Iron Age (habitation) sites have been dated from about 1000 B.C. in northern Karnāṭaka and from the 7th century B.C. at Paiyampalli.

During the last four decades many new discoveries have been made. An exhaustive account of the known megalithic sites is given by Gururaja Rao (1972) and also by Leshnik (1974). Narasimhaiah has studied the distribution pattern of various megalithic burial types found in Tamil Nadu and mainly on the typological basis he dates the various types within a time bracket ranging from 500 B.C. to 100 B.C., the earliest types being found in north-western parts and the latest ones in the Tirunelveli District.

There is still no proper definition of the Early Historical period as far as the excavated material is concerned. If the appearance of writing is taken to mark the

advent of historical period, then c.200 B.C. may be taken as the starting point. This however cannot be easily fixed in the archaeological contexts which do not supply sufficient written material. But some written material has been unearthed in many of the 'historical' sites: Alagarai, Uṟaiyūr, Karūr, Koṟkai, Vallam, Arikamēḍu, Madurai and Koḍumaṇal. In all the sites the transition to the historical period does not show any break. There is a perfect continuity. May be, the historical period saw the introduction of bricks and tiles for constructing buildings. Even though full plans of early structures are not yet available due to the limited nature of the digs, burnt bricks of big size and the grooved tiles were encountered in many of the above sites.

The Problems:

Most of the excavations referred to above, by their pioneer nature involved collection and classification of data only. Again they were, with a few exceptions, small scale works. The primary aims of those were to find out the antiquity and the culture sequence for the concerned sites. So they did not require much interpretative work. If some questions were posed they were only incidental. Added to this descriptive nature of the works, the findings were kept by the excavators for themselves and thus failed to attract further research in them. As there were framed no hypotheses for testing, the District-wide exploratory works were also not so fruitful and left unnoticed. Some scholars who asked questions or enunciated hypotheses kept aloof and did not interact much with the actual field workers.

Some of the questions that come to mind immediately on reading the available literature may be mentioned now. Is there a continuity between the Mesolithic (or Late Stone Age) and the Neolithic stages? Narasimhaiah inclines to say so. But his pre-pottery Neolithic phase is yet to be proved convincingly. The relation of the Neolithic culture of Tamil Nadu to that of Andhra-Karnāṭaka area is not clearly settled. Its extension into the southern parts of Tamil Nadu has also to be probed further. A related question is, who were the authors of this culture? Were they autochthonous to or immigrants into the peninsular India? The Allchins suggest that they should have been the speakers of Drāviḍian languages migrated from Iran or thereabouts on the basis of similar pottery and skeletal remains of Caucasoid or Mediterranean features (Allchin 1968).

Certainly there is some discontinuity between the Neolithic culture on the one hand and the succeeding Iron Age culture on the other, though they coexisted for some time during the transition stage. Strangely, there intervenes no Copper Age in peninsular India as in the Deccan and other areas. Next, what exactly is the relation between the people who produced the megalithic burial complex and the people who introduced iron in this area? There seems to exist some time gap between the two events. The impression may prove to be wrong when more evidence is collected. In the Vidarbha region of Mahārashtra

(about Nagpur) the megaliths are dated by radiocarbon method from the beginning of the 6th century B.C. (Deo and Jamkhedkar 1982). So far no such independent radiocarbon dates are available for the southern megaliths. The present dating is based on typological classification or on some dubious numismatic evidence. In this connection the occurrence or non-occurrence of the so-called Andhra ware or Russet-coated ware has also been used. It has been claimed that this pottery spread from the Karnāṭaka-Andhra region into Tamil Nadu. But actually this pottery seems to have its original home in the Koṅgu region (Coimbatore - Periyār Districts) as it occurs in profuse quantities in this area and outside the area it occurs in proportionately lesser quantities. Gururaja Rao (1972) suggests that the Russet-coated ware might have had its origin and growth in the lower Kāvēri basin, basing his argument on the evidence from the Tirukkāmpuliyūr excavation. But it may be mentioned that in the Thañjāvūr delta this ware has not been noticed so far. At Vallam not a single sherd of this pottery was found. Its clear stratigraphic position and its relation and proportion to the Black-and-Red ware should be studied carefully before any generalisation is made. In this connection the evidence collected from our recent excavation at Koḍumaṇal may help to a great extent as here we get comparable pottery both in the habitation deposit and within the burials.

The next problem is that relating to the authors of the megalithic culture. Many scholars stress, each for his own reasons, that it is the Drāviḍian speakers who introduced the megalithic culture into South India.[3] One basis for all these hypotheses is that the area of the megalithic burial complex and the area of the Drāviḍian speakers almost coincide. The tenuous anthropometric evidence of a few skeletons found in the burials was also used in this connection. Some questions however have to be answered convincingly before this equation is accepted. There is a possibility that iron was introduced into India by a wave of Āryan immigrants about the end of the 2nd millennium B.C. (Allchin, B&R., 1968). But there is no evidence to relate the Āryan-speaking communities with the megalithic monuments, even though Asko Parpola thinks otherwise (Parpola 1973). Secondly, the megaliths appear too late in the South Indian context. Thirdly, the identification of the settled Neolithic communities who had occupied the area right from about 2500 B.C. becomes a problem if they were not themselves the Drāviḍian speakers.

As mentioned above, most megalithic burial sites are found without any habitation nearby. So now some scholars have postulated or revived some old idea that the megalithic people were some sort of pastoral nomads (Deo 1983, Leshnik 1974, Narasimhaiah 1980). S.B.Deo on the basis of some careful statistical

3. A summary of these views is given in Gururaja Rao (1972) and in Narasimhaiah (1980).

analysis of his Vidarbha material points out that agricultural implements are proportionately less compared to war weapons in the iron repertoire of the megalithic burials. Leshnik produces some demographical data to support his idea. Narasimhaiah has also questioned the earlier suggestion that the megalith builders first introduced tank irrigation in Tamil Nadu. All these scholars suggest that the Black-and-Red pottery in the megalithic burials was acquired from contemporary settled communities. If so, what is the evidence for these other communities? Secondly, could some nomadic tribes build such huge monuments which involved lot of labour and a good knowledge of local geology and geography? Moreover, S.B.Deo (1983) has noticed that the megalithic sites are found in clusters in the Vidarbha area, which may not be possible if their founders were nomadic people. So there crop up a chain of such problems if the megalith builders are considered as a nomadic people. But the opposite view also cannot be stressed unless and until a few associated habitation sites are identified and thoroughly excavated.

Whoever were the authors of the megalithic burials in the beginning, they became part and parcel of the Tamil society by the dawn of the historical period. The Cankam anthologies refer to the popularity of the urn burials (Sirinivasan 1946). They also refer to cremation of the dead. Even in the *Manimekalai* a post-Cankam text, urn-burials and perhaps cist burials also are mentioned. The Cankam evidence may provide a clue as to the original authors of the megalithic tradition. That is by the way.

As mentioned earlier, there is no cultural break between the Iron Age and the historical period. But we have still the problem of defining more rigorously the advent of the latter. It has to be checked whether brick-built buildings and the Brahmi writing are peculiar to this stage. Here the evidence from our excavations at Vallam and Koḍumaṇal may be considered. In the limited dig inside the fort area at Vallam near Thañjāvūr, the two bottom most layers, (9) and (8), yielded the Black-and-Red pottery and the associated Red pottery in a total deposit of 0.9 m. The deposit was clearly divisible into two sub-periods. In period I-A (0.6m deposit) the pottery contained a number of graffiti symbols while in the period I-B (0.3 m deposit) the pottery had practically no graffiti. But in I-B a few sherds were found with Brahmi letters. Does this mean that the graffiti, which had been earlier used for some sort of communication, were replaced by the Brahmi writing? It may be mentioned here that many other sites in Tamil Nadu yielded graffiti-bearing pottery. They have to be studied for their proper strati-graphical context to get answer to the above question. At Vallam the graffiti context is put to early 2nd century B.C. by a single radiocarbon date.

At Koḍumaṇal the Black-and--Red ware deposit is about 1.5m to 2m thick and the Brahmi letters seem to appear from the earliest

level. And interestingly, a name written in Brahmi characters was obtained from a cist inside a cairn circle. This may be an evidence for the extension of megalithic burial cult into the historical period.

The excavation at Arikamēḍu has elucidated to some extent the maritime trade of the Tamil country with the Roman empire and by the way confirmed the literary evidence relating to this aspect. But so far very little is known about the internal trade activities and about the general economy. In this aspect the excavated material may help to a great extent. For instance the etched carnelian beads are found in good number in the megalithic graves of Tamil Nadu, particularly in those of the Koṅgu region. Koḍumaṇal has yielded as many as eighty beads from a single burial. Carnelian, a semi-precious stone, is not available locally. Most probably it was imported from Gujarat. It may be recalled here that the Caṅkam poem *Paṭṭiṇappālai* (1.187) refers to 'precious stones and gold from Northern Hills' imported into the port of Kāvirippūmpaṭṭiṇam. Such material bearing on the economy of the early period has to be studied more carefully. Textual evidence can be clarified very much by the diligent use of archaeological material.

Even though lot of research has been made in the field of historical archaeology particularly in medieval archaeology (sculpture, architecture, etc.) the literary and inscriptional data have not been adequately used. There is a lot of untapped potential in both the Tamil literature and inscriptions. For instance, there is a lot of information in them relating to ancient place names. It is possible using this data to reconstruct the pattern of ancient settlements and correlate them to the archaeological picture. An attempt has been made by Champakalakshmi (1976) to see whether there exists any correlation between the settlements of the Velirs and the megalithic sites. The demographic information found in inscriptions should also prove to be useful to check the archaeological evidence.

What should be the future course of action? The major defect of the previous archaeological research works was their piecemeal nature. Whatever reasons existed in the past for that, in future, only planned large-scale research projects must be undertaken as far as possible. Otherwise a complete picture of early cultures would never be available. We should aim to unearth completely at least some streets of our early towns and villages. In Koḍumaṇal there awaits us such a bright prospect. A trench in the last excavation revealed as many as eight floor levels, all in the Black-and-Red ware context. Resources may not be a problem if they arejudiciously pooled for joint ventures by the University Departments and the Government Departments. Only a team of archaeologists and scientists in the allied disciplines can cope with the magnitude of the work awaiting. In the Indian context archaeologists can and should take the help of scholars in the literary and linguistic fields. To create awareness

in, and purposeful dialogue on, the new finds, publications must keep pace with the discoveries. Our ultimate aim should be that the results interpreted scientifically should reach and educate the larger public and make them understand the country's cultural heritage in proper perspective.

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A HISTORIAN'S VIEW OF THE ARCHAEOLOGY OF TAMILNADU AND KERALA

M.G.S. Narayanan

It is with real trepidation that I stand before an audience of professional archaeologists, to deliver the inaugural address of this seminar. Time was, even in the beginning of the present century, when a distinguished scholar like Vincent Smith could dabble in archaeology, epigraphy, numismatics and modern Indian History at the same time with perfect immunity and complete mobility. This is no longer possible today, nor even desirable. Even the broader concept of archaeology as including the study of inscriptions, coins, monuments and sculptures along with excavation of sites, has become increasingly untenable. Each separate branch is developing its autonomy, technical jargon, problems and methods with the result that a dialogue becomes difficult even between those who work in the field of prehistoric archaeology and those who work in historical archaeology. Well, these are signs of development though development always brings a new set of problems while solving old problems in its course. Today the growth of narrow specialisation, which is certainly necessary, also creates an imperative need for occasional seminars like this where experts from neighbouring fields inside and immediately outside archaeology have to come together to exchange notes, take stock of the situation and plan projects which will be mutually helpful, with proper orientation and perspective. Like the great emperor Asoka, archaeology has to deal not only with its own subjects within its own vast empire, but also with the *pratyanta* states.

It is this idea that gave me some courage and the confidence to accept Prof.Subbarayalu's invitation to deliver the inaugural address here. I am not a professional archaeologist, but, as a historian, I claim to be a client of archaeology, a consumer of its findings. Does the cosumer have the right and the authority to interfere in the work of the producer, to look into the techniques and the ethics of production, to criticise and to propose? Perhaps the answer will be 'yes' in these days of consumerism. At least I presume that it is 'yes' and that it is useful and profitable to both sides. I believe that archaeology is not simply the business of archaeologists alone. The past, the remote past, is the common grazing ground of anthropologists, archaeologists, Indologists, Tamilologists and historians, and it is my humble submission that only an active spirit of give and take among all these disciplines can even hope to produce a satisfactory picture of the prehistoric and early historical periods where

different forms of evidence tend to converge.

In my own case I started consuming more and more of archaeological literature, taking its techniques more and more seriously, because of a growing sense of inadequacy about the other sources in understanding the history of ancient India, particularly South India. The wild and very often irresponsible speculations of literary scholars, the passionate prejudices among language experts, the lack of authenticity of many old literary works themselves as they are riddled with fanciful accounts, interpolations and the innate bias of the authors--these land the historian in unending debates. History tends more and more to be fiction, and that too fiction about those few leaders based on what they wanted to reveal about themselves. For instance, what do we know about Asoka's propagation of Dharma, except what he has certified? Its impact on society, if any, is practically unknown because nobody has bequeathed to us any criticism or assessment in rock and stone. Archaeology on the other hand, with its wonderful techniques of stratigraphy, chemical analysis, carbon tests, etc. would give us a direct access to the way of life of a people. Moreover, we are not observing what they deliberately wanted to preserve for posterity, to deceive posterity in many cases, but what has been preserved by nature. There is more of certainty and precision, and what is more, less dependence on what the leaders and spokesmen, or the exploiters and the oppressors, had to say about society in the different ages. The excavated sites give us a report about life in general, the life of the people as a whole, not merely the life of the great men so-called. Again, some of us are drawn more towards Archaeology because of our interest in material culture which appears, in spite of our wishful thinking, to be the powerful determining factor in history. Let me pause here for a moment to clarify that materialistic interpretation is not inimical to the real spiritual wealth of mankind or its culture, as is misrepresented even by many great scholars in India. On the other hand, I see it is an attempt to see human affairs in scientific perspective, and what is more, it offers to provide a continuation and fulfilment of the rich Indian thought, Aryan or Dravidian according to the old-fashioned racialist nomenclature, through the ages.

In Tamilnadu and Kerala which were integral parts of ancient Tamilakam, and also portions of the old British Presidency of Madras, Archaeology started in the last century as the offshoot of British official interest, -- Bruce Foote, Burnell, etc. -- and partly as the product of Indian curiosity about our own past in the era of nationalism. The strong currents of British imperialism, Indian nationalism and regional Tamil nationalism in the present century have stimulated archaeological activity and promoted new discoveries and explorations and at the same time caused a few distortions in development also. I hope these will be analysed in some detail in the forthcoming seminar discussions here. Perhaps the major weakness even today, in spite of the entrance of academic institutions like the universities into the field, is the absence of a masterplan and efforts to coordinate explorations and findings. A stage has arrived in Indian archaeology where the integration of the results obtained by several agencies,

governmental and academic, from different sites will have to be attempted. A collective stock-taking effort is overdue as a prelude to further meaningful activity in the discipline. Interpretation and correlation at the higher level can also be taken up with advantage.

As I go through recent published material, I find that some attempts to survey the field have already been made. The late Dr.T.V.Mahalingam had prepared for the Madras University a survey of Archaeology and Epigraphy in South India. Dr.R.Nagaswamy, former Director of the State Deptartment of Archaeology in Tamilnadu, published a series of books and monographs where the progress of exploration and interpretation in connection with hero-stones, inscriptions, excavations, etc. in the sixties and seventies has been reviewed. A similar attempt was made in the Department of Ancient Indian History and Epigraphy, Karnatak University, Dharwad, when they published in 1978 a slender volume on "A Decade of Archaeological Studies in South India". In special subject areas we have Dr.B.K.Gururaja Rao on the *Megalithic Culture in South India* (1972), Dr.A.Sundara on *Early Chamber Tombs of South India* (1975), Dr.A.Velu Pillai on *Epigraphical Evidences for Tamil Studies* (1980) and a few others which are justly famous among researchers for their comprehensive character as well as their insights and discoveries. Dr.Clarence Maloney wrote a longish review in 1975 on the subject of our seminar where he has raised a few fundamental theoretical issues regarding the genesis and early development of civilised society in this region. These are good beginnings, and to some extent they compensate for the absence of detailed reports on separate sites. But it is a pity that the detailed reports on various excavated sites and exciting discoveries have not yet been published. The main culprits are the Archaeological survey of India and the State Departments of Tamilnadu and Kerala and the Universities have followed their bad example. However, it is heartening to find that there is a spate of research papers being published by individuals in respectable journals. The excavation reports on Uṟaiyūr, Kāvērippaṭṭinam, Kānchi, Koṟkai, Karūr, Pērūr, Ukkirankōṭṭai, Nattamēḍu, Koḍungallūr, etc. will certainly make a revolutionary change in the scene if and when they see the light of the day.

The discoveries of ancient inscriptions at Pūlāṅkuṟichi and Jambai created a big stir in the academic world in 1979 and 1981 respectively but we are still waiting for their texts and studies and for follow-up activities in those localities. Even a casual perusal of press reports in the last three or four years would reveal a number of exciting discoveries. Let me mention one of them here. In Kerala, the prehistoric rock shelters with stone tools, drawings and burial sites were noticed by Mr. S.P.Thampi in 1975 at Marayur in the high ranges (Devikulam Forests) but the full picture has not yet been revealed. As pointed out by Mr.Rajan Gurukkal in a popular article (*Indian Express*, Monday 13th of August 1979) it has put Marayur in the archaeological map of world prehistory. Thampi published a brief report in the Bulletin of the Deccan College (March 1976) and joint report on the rock-paintings by Thampi and Ronald M.Bernier appeared in *Archaeology* (Jan./Feb., 1979). Gurukkal himself has summarised his find-

ings for popular consumption but the site has enormous potentialities which can be exhausted only by explorations and excavations on a large scale. The position of other newly discovered prehistoric sites in North Kerala is slightly better. When Prof.Sankalia came to our Department for National Lectures in 1973 we went to inspect the well-known Edakal rock-shelters in Wynad. He informed us that on looking at the Malabar landscape from Palghat to Wynad he found the possibility of unearthing prehistoric settlements in the area. We requested him to suggest exploration of this area as a topic for his colleagues and disciples in the Deccan College. Dr.P.Rajendran of the Deccan College has already translated this dream of Prof. Sankalia into practice. Before taking up his work, let me indulge in a bit of friendly criticism of the Archaeological Survey of India which has a black eye for Kerala. A separate state of Kerala does not exist in their official files. While most other states in India have a separate circle of the ASI, Kerala has been treated as an outcaste. A publication of the ASI named *Monuments of Kerala* by H.Sarkar, (1973) opens the chapter on monuments with the comic-dramatic statement that "literally speaking, the History of Kerala has no prehistoric chapter". The author goes on to write about "a few foodgathering tribes like the Kāḍan, Ūrāḷis, Malapaṇḍārams and so on" and the Parasurama legend. You really fail to understand what the author meant by his first sentence, quoted earlier, by the time you reach the third sentence about "a few microliths of the Late Stone age, Neolithic and Chalcolithic times". Then he refers to stone and quartz flakes from Edakal in Wynad and the etchings which he wrongly describec as the carvings of Edakal Malai. Mr.Sarkar is quite intelligent and knowledgeable but I am afraid that he was making mistakes after mistakes in a vain effort to cover up the inactivity of the ASI in Kerala. I am aware of the fact that he was only repeating without acknowledgement the 19th century views of others which were completely justified at that time. Now in the light of his work Dr.P.Rajendran has rightly pointed out with proper modesty and moderation, well-becoming of a good scientist, the fact that such conclusions are very much out of date.

Coming to Tamilnadu proper, let me take up two points where the scholar concerned, Dr.R.Nagaswamy in this case, has at once done great service and great disservice to the cause of archaeology. The first is about an announcement, reportedly made by him in the press, (*Indian Express*, 23rd July 1975) when he was preparing for a second round of excavations at Korkai, the ancient port-city of the Pandyas. Let me quote: "Earlier excavation at this place had yielded valuable material, including charcoal finds dated by the Tata Institute of Fundamental Research to 750 B.C. Another find was a pottery piece of a highly polished black ware, generally associated with Mauryas of the third century B.C. This was the first time such a piece had been discovered in Tamil Nadu. If it was established that the piece belonged to the Maurya period, then it would show there was an active contact between the north and south even then, he said".

The discovery of NBP ware from Korkai is the most sensational

piece of news that I had for many years. It is all the more interesting to me since it appears to support my hypothesis that Tamil society of the Sangam period had its initial stimulus, not from the Roman empire as Dr.Clarence Maloney would like to be mentioned, but from the Magadha empire earlier. However, in all these years Dr.Nagaswamy has not condescended to share the secret of the NBP ware with other Archaeologists and this makes it difficult for scholars to decide either way. There seems to be no alternative but to request some other body to undertake fresh excavations at Korkai.

There was another announcement from Dr.Nagaswamy in the Press (29th February 1980) with regard to the discovery of 2000 year-old burial urns with Black-and-Red ware bowls and dishes from Kovalanpottal. It was stated that the urns corresponded with the mode of burial described in *Cilappadikāram*, and that the location is known as Kōvalanpoṭṭal on the basis of the popular belief that it was here that Kōvalan, the epic hero, was beheaded. What came out of these excavations in the vicinity of Madurai? I think it is anybody's guess, but I for one have not been able to see any further report on those lines.

Perhaps the most exciting news report to come from Tamil Nadu in recent years, apart from the stray brief discussions about Kaverippattinam, was about the discovery of another Roman colony by the State Department of Archaeology at Kottaimedu situated on the west of Aḻakankuḻam at the "confluence" of the Vaigai with the Bay of Bengal. Besides potsherds, many cut chaṇks, pieces of bangles, ear-rings, etc. are stated to have been found strewn all over the place. This mound deserves to be excavated thoroughly. It is also the first Roman site to be discovered in the Pandyan country *(Indian Express,* 7th October 1983 and 29th October 1983).

There are also more recent reports about the discovery of Megalithic paintings by the Department of Ancient History and Archaeology, University of Madras, at Chennarayanpalli, near Gudiyatham (North Arcot District) in Tamil Nadu *(The Hindu,* 13th March '84). Again there is the discovery of a large beautiful "Roman" sarcophagus from Auroville *(Indian Express,* 30th May 1983). Certainly the discoverers deserve to be congratulated but it is more important that the discoveries are followed up with further explorations and excavations and most important of all, with publications of the results in due course. Let me add a footnote here to the effect that a similar big sarcophagus came to notice in Kerala, along with the usual burial urns and a chamber, at Muzhikal, near Calicut *(Malayala Manorama,* Thursday 8th March '84).

In Kerala two coin hoards have been brought to notice by sheer accident in two places very near the ancient port-city of Muciri or Muziris (Koḍuṅgallūr) -- one at Valluvalli in North Paravur and the other at Puthenchira in Maala *(Malayala Manorama,* Monday, 5th September 1983 and 30th February, 1984). It was reported that the Paravur hoard contained about 1600 gold coins weighing 8, 12 and 16 grams and that about 121 of them have been recovered by the police. In the same way 272 punch-marked silver coins have been recovered by the police at Puthenchira also. The first appears to be a hoard of Roman Dinarii

and the second, a hoard of silver punch-marked coins of the same type as discovered earlier from Iyyal and Elikulangara. I have to reserve my comments about the implications of these and earlier coin hoards from Kerala for another paper. However let me suggest here that we are yet to realise the great historical significance of Magadha type silver punch-marked coins which have come out from several sites in South India.

Archaeologists and historians interested in piecing together information about the past of Tamilakam, have to keep their eyes open towards the East and the West alike, in view of the fact that our peninsula is located in the centre of an ancient international maritime trade route which brought many cultures together in a unique fashion. In this connection I found the report about Quseir al Qadim or "Ancient Quseir", the Arab name of the Egyptian port called Laucos Limen or "White Harbour" in Classical times. This Egyptian port is situated northeast of Ancient Coptos on the Nile, and served as a Roman window opening to the East in the first and second centuries of the Christian era. Recent excavations for two seasons from 1979 financed by the Smithsonian Institution and the National Geographic Society uncovered store houses for oil, wine and spices along with fine Roman pottery including Arretine ware. They also brought out the first Tamil inscriptions from Egypt. The exacavators "noted affinities between the Roman-Egyptian pottery and those of Arikamedu" and also identified "characteristic Indian pottery", "further confirming the trade connection between the two sites". They found teak, jute and pepper and also 3 potsherds, resembling what Mortimer Wheeler called "the coarse local ware of Arikamedu with crude graffiti"[i.e., Tamil Brahmi]. The best preserved part of it contains a familiar Tamil and Malayalam name--that of Cāttaṉ (Donald Whitcomb and Janet H.Johnson, "Egypt and the Spice Trade", *Archaeology*, Vol.34. No.6. Nov./Dec. 1981). I hope the Archaeological Survey of India will take immediate measures to trace the details of the sea travel by Cāttan the merchant from South India to the Roman empire.

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EDUCATION AND SOCIAL CHANGE IN A TRIBAL COMMUNITY

D. Robert Sathya Joseph

The present day tribal societies are undergoing a lot of changes due to the impact of Education and alien cultures. A small tribal community called Mullukurumba has been taluk, for the present study. The problems which they face in acquiring education and social changes that are taking place in their society are discussed here.

Quoting Thurston (1909) Aiyappan (1948) Luiz (1962) etc. Rajalakshmi Misra (1971) states that the "Mullukurumbas are a distinct tribe." They are distributed in an area of about 30 to 35 K.M. radius which includes part of Gudalur taluk of the Nilgiris district, in Tamilnadu and part of Wynad district of Kerala. This paper is based on the data collected from the Mullukurumbas of Gudalur taluk of the Nilgiris district. Their speech comes under the South Dravidian family of languages. It is closely related to Tamil-Malayalam subgroup. It is related more to Malayalam than Tamil.

The area in which they are living is a multilingual one with Multi-ethnic population of both tribals and non-tribals. The tribals like Paniya, Betta, Kurumba, Kattunayakka and the caste people like Nair, Brahmin, Tiyan, Chettis etc. are living in that area. In addition to these, the immigrants from Kerala such as Christians and Muslims are settled all over the Gudalur taluk.

Language Situation

As far as the language is concerned the tribal people, particularly those who live in the border area are facing a lot of problems. Naturally, their language problem is affecting their Education also. The tribal languages of this area such as Paniya, Betta Kurumba, Kattunayakka, Mullukurumba, etc. are not only differing from the non-tribal languages but also from one another. The three literary languages viz. Tamil, Malayalam and Kannada have been exerting their influence on the tribal languages for a long

time. Though, the official administrative language is Tamil in Gudalur taluk and Malayalam in Wynad district, the Malayalam language is predominantly used in Gudalur taluk also, because the immigrants from Kerala are settled all over the Gudalur taluk. Malayalam which is considered as the native language is found in the speech behaviour of every speaker whether he is a Tamilian, Kannadiga or the different groups of the tribal people. Malayalam is mainly used as a business language. So from the linguistic point of view, one can see different situations and problems among the Mullukurumbas of the Gudalur taluk.

A person having other than Malayalam as mother tongue finds it a little difficult to manage his daily affairs. In order to mix up with the local people one has to use some kind of Malayalam. When the Mullukurumbas come in contact with the Tamil speaking school teachers, or government officials, they try to speak in Tamil. Moreover, the tribal languages of Betta Kurumba, Kattunayakka Paniya etc., are not intelligible to the local Malayalam speaking people. So, in order to have contact with local people, the tribal people have to use some kind of Malayalam. Thus apart from their own language, the Mullukurumbas have more chances to speak Malayalam and less to Tamil. When they communicate among themselves, they speak only in their mother-tongue. In addition to these, they have much contact with other tribal languages for generations. Thus they have a complicated language situation.

Education

Traditionally, Mullukurumbas believe that education is only to read and write the epic tales which are found written in Malayalam script and therefore they are not willing to study after 4th or 5th standard. In Gudalur taluk both Malayalam and Tamil were taught in the Government Tribal Residential schools (GTR Schools) till 1965. Since then Tamil is continued as the only medium in the GTR schools, Now the tendency is changing. Most of the Mullukurumba children are attending the schools regularly. Moreover, those who have studied upto 8th standard or SSLC are appointed in the Government departments at various levels. So there is remarkable improvement in the literacy and educationl standards of Mullukurumbas.

According to the genological particulars collected from the Kappala settlement, most of the people who belong to the first generation (present generation) are literate. Among the second generation out of forty six members two have completed SSLC. Three studied upto 10th standard including a woman. Another man has studied upto 9th standard, four have studied upto 8th standard

including two females. One woman has studied upto 7th standard. Twelve members including three women studied upto the 5th standard. Only one female member has studied upto 3rd standard. All the other twenty two members including fourteen females did not go to school. All the male members who have studied upto 8th and above are working in different departments at different levels. But non of the females are working. In the third generation out of twenty three members only three male members are educated upto 5th standard and another three upto 3rd standard. All the other seventeen members including eleven females did not go to school. In the fourth generation none of them are literate. Here one can notice the fast advancement in education from one generation to the next. Compared with males, the females are much backward in their education.

The Problem Concerning their Education

The children who are attending the GTR schools in Gudalur taluk belong to different tribal communities like Paniya, Betta Kurumba, Kattunayakka, Mullukurumba etc. There is no uniformity in their culture, language and economy. Jean Lawrence (1879) pointed out that the speech of Paniya is a separate language closely related to Malayalam. Jayapal (1978) states that Betta Kurumba is a separate language. According to Natanasabapathy (1980) Kattunayakka is a dialect of Kannada. The speech of Mullukurumba is closely related to Malayalam and Tamil. These differences are overlooked by the planners of education. The same text books which are adopted for the non-tribal people in the plains are being supplied to the GTR school children. So, the gap between the home language and the school language is wider.

Usually the girls are not allowed to go for higher classes after fifth standard, because of the fact that the educated girls do not have much chances to work in the schools or in other government departments. The Mullukurumba males living in the Gudalur taluk of Tamilnadu are choosing their brides from the Wynad district of Kerala. There, they are educated in Malayalam medium schools and after marriage they are brought to Tamilnadu. Likewise, the girls who are educated in Tamil medium schools in Gudalur taluk are married to the Mullukurumbas from Wynad district and they cannot work in the nearly schools or in the Government departments. So this type of matrimonial alliances create an unique regional language problem. So their traditional marriage system[1] seems to be one of the barriers for the education of females.

As already mentioned, different types of students are attending

the GTR schools in Gudalur taluk. Compared with the other divisions of the tribal children, the percentage of dropouts is high among Paniyas. According to GTR school teachers, there are two main reasons for the drop-outs. One is to attend their household works and the another one is migration particularly among Paniyas. Compared with the other classes the number of dropouts is high in the 5th standard. Because after this primary level of education they have to go to another school which is in most cases quite far off from their settlements.

Among the tribal population of Gudalur taluk the Mullu-kurumbas are much advanced socially and economically. This may be due to their settled life, education and their contact with the new settlers of the area. Consequently many changes are taking place in their society. The necessity of having education and better economic conditions are now being felt by the Mullukurumbas themselves.

Social Change

Change is an ever present factor in human society. Change may result from internally induced actions. Such indigenous or home-inspired transformations (dis-coveries or inventions) are called innovations. Change may also result from the incorporation of diverging patterns practiced by others, this is called diffusion. Diffusion, the spread of cultural traits from one society to another accounts for a much greater share of change than innovation. Crisis and conflict often initiate change, but it is also true that change can promote or intensify crisis and conflict. Change often makes people uneasy; it uproots us from familiar surround-ings, meanings, habits and relation-ships, creating fear and anxiety (Reece Mcgee 1980:510, 513).

The tribal population in India today are anxious to acquire literacy, education and improve their economic condition. Usually when a major change is taking place in a society opposition will arise from the same society itself. One of the major change that is taking place mong Mullukurumbas is those who are educated and have more contact with the people of plains want to have a break through in their traditional rules and regulations. They would like to enter into modernization

There are two divisions among them viz *ta:levaram* and *me:levaram*. Those who do not like modernization belong to *ta:levaram* and those who like modernization belong to *me:le-varam*. People belong to *ta:levaram* believe that the traditional rules and regulations of their society are granted by their God. Also, they believe that if they violate the traditional rules and regulations, their God will get angry and they may be put into trouble. People

belong to *me:levaram* believe that the traditional rules and regulations of their society are created by the Nair land lords with the intension that the Mullukurumbas should not come forward economically and socially. So they have started violating their traditional dress, ornaments and also the traditional way of conducting the ceremonies.

"The different aspects of culture are so inter-related that changes in some are bound to lead to concomitant changes in other aspects also" (N.D.Majumder 1973). Consequent to the above mentioned divisions in the Mullukurumba society, many other changes are also taking place. One important change in their society is that the traditional settlement pattern is changing. Rajalakshmi Misra (1971) states that Mullukurumba settlements consisting of one to eighty houses, settlement consisting of one to five houses or fifteen to eighty houses are a few. Luiz (1962) pointed out that "Mullukurumba settlement consists of about six to twelve huts." Each settlement consists of a *teyvappera* 'temple house' few *kottil* 'husking shed' etc. Traditionally if anybody wants to construct a house outside his settlement he has to get the permission from the headman of the settlement as well as the deity. But now due to the increase of population and land value, Mullukurumbas are anxious to acquire lands in the forest area. Naturally they are violating their traditional rules and regulations and constructing houses as they like. So the number of settlements is increasing. For example Rajalakshmi Misra (1971) pointed out that there are eight Mullukurumba settlements in Gudalur taluk. The present author noticed ten settlements in 1980. Perialwar (1987) pointed out that there are sixteen settlements in Gudalur taluk. Consequently, the settlement pattern is also changing.

The relationship between religion and change has been often observed among the primitive societies. Mullukurumbas are not Hindus. They have their own indigenous religious system. But due to the influence of people of the plains they are partly Hinduized. Traditionally they worship their God inside the *teyvappera* without any idol. The life cycle ceremonies are conducted in the *teyvappera* itself. Now a days particularly those who belong to *me:levaram* want to conduct the marriage ceremonies in the temples like others. In 1982 one Mullukurumba marriage from Kappala[2] was conducted in the nearby Hindu temple. Also they want to go to the Hindu temples and worship there like other people.

One important change taking place in their society is that the people belong to *me:levaram* are started violating their clan system.[3] One Mr. Ramakrishnan belongs to vatakkekulam has married a lady belongs to the same clan.

Similarly a lady called Janahi from Kappala settlement married a man belongs to the same clan from another settlement. This type of violating the clan system brings a structural change in their society. The traditional Mullukurumba society can be divided into four levels viz. Tribe, clan, family and individual. But those who are violating the clan system can be divided into three levels only.i.e. Tribe, Family and Individual. This division may be strengthened in course of time and two Mullukurumba society may be formed.

Another important social change taking place in the Mullukurumba society is related to the educated who are not willing to identify themselves as a Mullukurumba. They want to identify themselves as a Tamilian or a Malayalie according to the situation. Whenever the educated come in contact with other people they converse either in Tamil or Malayalam. Only the illiterates are using their mother tongue outside their settlement. Another thing is those who are employed in other places want to educate their children in English medium schools. So, one important fact to be observed here is that with the passing of time the number of speakers of Mullukurumba language may decline considerably.

NOTES

1. Mullukurumbas prefer village exogamy and clan exogamy. Moreover, they avoid cross-cousin marriage, parallel cousin marriage and sisters daughter marriage.

2. Kappala is the biggest Mullukurumba settlement in Gudalur taluk.

3. There are four clans among the Mullukurumbas viz. *Vatakkekulam*, *Villippakulam*, *Ka:tiya kulam* and *Ve:nkatakulam*. They have the belief that the members belonging to a particular clan are descendants of one mother. So marriage should not be arranged within a clan.

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MAYAMATAM, THE TRADITION OF MAYA*

V. Ganapati Sthapati

It gives me great pleasure to extend my hearty congratulations to the Tamil University for having organised a seminar on "temple cars". A number of seminars on various subjects have taken place in TamilNadu but not one on temple cars. Being a much neglected theme, I take the privilege of felicitating the organisers. To my knowledge no body has done any extensive research on this subject. Now I come to know that a researcher of this University, Dr. Raju Kalidos, (Associate Professor of History and Comparison of Sculpture) has done research on this subject and taken his doctoral degree.

The subject taken for scrutiny is an ancient art. It is highly technical. A full-fledged research on it could be taken only by an institution like the Tamil University. Because it is dedicated for this purpose and already a wing is working here. It is practically impossible to carry out an investigation on the subject by individuals like me. A thorough study could only be attempted by a team A complete survey of temple cars in TamilNadu should be undertaken, changes through the ages studied, their features photographed, catalogued; agamic and sastraic mandate collected and a comparative study done. Such a stupendous task could only be undertaken by the Tamil University When such a final report is prepared it may be sent to the *silpis* of the Mamallapuram College of Architecture and Sculpture who can give life to theoretical compilations.

The present paper seeks to supply some facts and figures to researchers. It strives to provide some guidelines to experts in this field of research and is basically an introduction to *ter (ratha* 'temple car'). The antiquity of wood carvings, the architectural traditions began by Maya, the *peruntaccan* (the superior carver); the way by which a

* Part of the paper presented in the Tamil University Seminar on "Wood Carvings and Temple Cars of Tamilnadu", Feb-March 1984.

simple wood work profession attained global fame when it evolved into a big *ter* work; information pertaining to those who are proficient in this field; the way by which it entered *silpasastras* and the craft guilds dedicatd to it constitute the subject-matter for the present paper. I will feel happy if this enlightened audience makes use of it. I don't want you to accept everything presented here. Further data could be supplemented to it to make it more useful. Certain ideas are repeated again and again to give emphasis to them.

At this juncture I would like to pose the question as to why the Tamils have a passion for only Muttamil (three Tamils), viz., *iyal, isai* and *nadakam*, and not *nanku*-Tamil (four Tamils), including sculpture in its fold. I doubt whether the Tamils have any reservation in acknowledging this great art tradition which has earned fame and name for the land. If you consider sculpture as one among the great heritage of the Tamils you must come forward to give it the due place in the Tamil University.

Living Tradition-The Southern Tradition

TamilNadu through the ages was the land which proclaimed the greatness of the arts. *Iyal, isai* and *kuttu* were nurtured here. The sculptural art was born here and reached the acme of its glory. The Tamils gave birth to many art traditions and created a separate niche for iconography. It is an ancient art. It had its origin two or three thousand years ago and grew into a mature art and is much acclaimed now-a-days Of the antique sculptural traditions of the world, Tamil Sculpture is considered to be one. The southern tradition is an antigue tradition, a living tradition.

The Tradition founded by Maya:

This great tradition was founded by Maya. He is considered to be the *adi-cirpi* (Progenitor of Sculpture). The way found by him is called *Mayamatam*. It means the principle of Maya or the Tradition of Maya. It will be apt to recapitulate here the sculptural treatise called *Mayamata*, used in the Tamil country. For later day *silpasastras* it served as the pioneer. In no other part of India do we come across a treatise in the name of Maya.

Literary Sources:

The Tamil epic, *Cilapadikaram (Puharkandam Indiravilavuredutta-kadai)* states that the kings of Vajra, Avanti and Magadha paid as tribute *korrappandar pattimandapam* and *toranvayil* to the Tamil king, Tirumavalavan, the Cola. An important idea connected with this is that these artistic creations were executed after the Maya tradition as attested by the *Cilappadikaram* itself. They were given to the North Indian kings by Maya himself as a gift. Now they come back to the Tamil country as part of tribute.

So Maya belonged to TamilNadu. He gave birth to a great art tradition on our soil. In his tradition a number of works appeared. His fame spread across the frontiers of TamilNadu. Many of the kings of the Bharata country, Bharatavarsa (Ancient India), were allured by his innovative works. He was a sculptor par excellence. Chronologically he belongs to a period anterior to that of the *Cilappadikaram*.

If the Tamil University could do some research on the tradition of Maya - about Maya himself - it will be a valuable

service. Many of the hidden secrets behind the curtain of history will come to light. No research work has yet been thought of in this direction. So researchers may undertake such a project. When we think of Maya as the Father of Silpa in TamilNadu, let us have an idea of his personality as found in other parts of India

Maya in Samskrt Literature

Samskrt literary masterpieces like the *Ramayana* and *Mahabharata* have much to say about the art creations of Maya, the cities erected by him, the forts built by him and so on. Though the *Ramayanas* of Valmiki and Kambar are poles apart chronologically, the substance is the same So the message that they bear are very ancient So also the case with *Villibharatam*. So it will be appropriate (not an anachronism) to cite some passages from both the Tamil and Samskrt works

1. According to Kambar the city of Lanka which was destroyed in a conflagration after Hanumant's visit was rebuilt by Maya. *Kambaramayanam*, VI *Iravanan Mandirappatalam*, v.12
2. The *Ramanaya* of Valmiki has a reference to Maya and the pleasure garden built by him for Svayam Prabha, an alter ego of Maya's better-half.
3. *Ramodantam*, a work on the *Ramanayana* theme, gives the information that Mandodari, wife of Ravana was the daughter of Maya.
4. According to the *Villibharatam*, Tamil version of the *Mahabharata*, Maya built the *Sabhamandapa* at Indraprasta for the Pandavas. It says that what could not be accomplished after years of work, imagination and canonic guidance, was done by Maya within a short period of fourteen months. The same information is given in the *Mahabharata* of sage Vyasa also.

All these facts enhance the view that Maya was a well known architect even before the time of the *Cilapadikaram*, the *Ramayana* and the *Mahabharata*. The tradition founded by Maya was the Southern tradition. We are sure that it is an ancient tradition.

The Creative Architects:

Since very ancient times a community of artisans called *kammiyar*, dedicated to the five fundamental professions, were doing yeoman service to creative arts. Also called *Kammalar* they were said to be the sons of Visvakarma. Literary works call them *Kammar*, *Kammiyar* and *Kaivinainar*. The five professions were the following, *Kollar*-iron works, *taccar*- wood works, *Kannar*-utensils work, *Cirpi*- temple construction and *tattar*-gold works These worksmen were indispensable in a society which wanted to lead a civilized and religion oriented life. At the time of *Cilappadikaram* such worksmen were leading a popular career. *Kollar* are called the strong handed ones with the epithet *karunkaikkollar*, the wood workers called *marankoltaccar*, the metal workers proficient in silver, copper and bronze works as *kancakarar* or *cembu ceikunar* and the goldsmith *pon cei kollar* and *nankalantarunar*. The sculptor is called *kannulvinainar*. Some are of the opinion that the same epithet indicates the painter. The latter opinion seems to

be right The above noted five are respectively called Manu, Maya, Dvasta, Silpi and Visvagnan by the family records of the artisan community.

The Learned Architects:

The *Cilappadikaram* and the *Nedunalvadai* of Nakkirar called the sculptor *nulari pulavar* (those proficient in learned literature). Traditional architects also reiterate the same opinion. Now-a-days the chief sculptor, while trying to define a *sthapati* uses the Samskrt equivalent of *nulari pulavan*, i.e. *sarvasastragnaha*, and then deals with his attributes. So it is quite evident that the nulari pulavan, noted in literary works, later becomes the *sthapati*.

Sthapathiha sarvasastragnaha sutragrahiti sutradhrt Vardhanat vardhakiha taksanat taksakoriti kirtitaha.

The *Nedunalvadai* (1.73-8) has an important passage pertaining to the choice of a site for building purposes. It averse that at a time of the day when the rays of the sun fully fall on the earth, i.e., at mid day (12 A M sharp) two pointed sticks should be planted on the earth and it should be such that the shadow of the sticks should not point to any of the directions, East or West At that time those proficient in the canons of architecture should measure the site. Then the direction for the building should be decided and afterwards the building for the king erected.

Cheran Cenkuttuvan, the king who possessed the white umbrella as his insignia, wanted to adore the Pattini-kadavul (Goddess of Chastity), Kannaki, and consulted those proficient in *silpasastra*. They in turn suggested that a boulder for making the image of the Goddess be brought from the Himalayas

Peruntaccar:

From what has been said in the preceeding two paragraphs, taken from the *Nedunalvadai* and *Cilappadikaram*, it is evident that *nulari pulavor* were architects. Apart from civilian edifices those engaged in building temples and making icons were known as *devattaccar* (architects of the gods). Proficiency in canons of architecture was their basic qualification. Sculpture is part of architecture. *Kollar*, *taccar*. *kannar* and *tattar* were the artisans, all called *nulari pulavor*. They are called *peruntaccar* in literature and inscriptions.

The builder of the Tanjai Peruvudaiyar Temple of the 10th century A.D is called Rajaraja Peruntaccan. The architect of the *vimana* of the Uttiramerur Temple of the 8th century A D was Paramesvara Peruntaccan and so also the author of the 7th century A.D Mamallapuram monuments was Kevadap Peruntaccan. This is what we gather from inscriptions.

Taccar in the Vedas:

The term *dvasta* appears a number of times in the *Rg Veda samhita*. He is called *taccan*. The maker of the spoon used in *yajnas* is denoted so in the *Rg Veda*. I *astaka*, II *adhyaya*, 6th *Rk*. The commentator, Sayana, notes *dvasta* as *devasambandhi taksanavyaparataha* *Taccan* is associated with god and so called *devataccan* and associated with Visvakarma. The *Vedas* call him *devataccan*.

Taccan in parlance:

Since very ancient times secular buildings, temples and *mandapas* were built out of wood. So architects were called *taccar*. Their duty was to unite wooden parts into a single unit for building purposes. The work of uniting various parts was called *taittal* (stitch). We may compare this to the tailor's job who unites the cut pieces of clothes by stitching.

Literature bearing on taccu and taccar.

In ordinary parlance *taittu* (stitch) became *taccu* and later denoted the carpenter's profession. Those engaged in *taccu* were called *taccar*. This is possible in conversational tradition. So all rituals done at the commencement of an architectural work are called *taccu mukurttam* and *taccu ceital* in the sculptor's parlance. The pillar planting ceremony at the beginning of any architectural work has *taccu ceidal* at its base. All canons of architecture in remote times were called *taccu nul* and *taccu sastram*.

The references to *taccar, perun-taccar, ilantaccar, deivattaccar, acura taccar* and so on appear in literature in this antique background.

We have already remarked that till the Pallava-Cola period the architects engaged in house and temple building were called *taccar*. Apart from wood those engaged in erecting cave temples were also called *taccar*. Note the names of Pallava and Cola *taccar* given above. *(Supra.) Srimatpataka vasina krtadhiya taksana sadavagmina tenedam Parames-varena mahate Sr, vasuje bhaskaraha.*

Origion of Samskrt texts:

While Canonic works in the field were written, the various technicalities connected with it were analysed and a new dimension added to it. This must have happened when the *agamas* were written. At that time religion and the temple arts marched together with united hands. It was at that time that in Tamilnadu *tiruppanis* were vigorous.

New names of taccar

From now onwards, one who was called *nularipulavan* and *peruntaccan* takes the designation *sthapati*, called *sutradhari* in North India but the implication is the same. *Ilantaccan* becomes *sutragrahi* and one who sculpts *taksa*. One who assembles the sculpted things is called *vardahi*. Since all were indispensable in the sculptural profession, they were kept in a team. This is revealed in the technical manuscripts maintained by *silpis*. They considered Visvakarma as their *kula-devata* (family god) in tune with social trends and also social status. Then they were organised into a discipline.

32 Architectural works

Thus 32 *silpa* and *vastu* texts were born. These are noted in the *Manasara* which are named after the chief *silpi:*

Visvakarma, Visvesa, Visvasara, Visvabhoda, Vrtta, Maya, Dvasta, Manu, Nala, Manavit, Manakalpa, Manasara, Bahusrata, Prasta, Manabhoda, Visva-bhoda, Maya, Adigera, Visala, Visva kasyapa, Vastubhoda, Vastu-Vidyapati, Paraceryaka, Kalayupa, Saiyatya, Chitraka, Avarya, Satakacara, Bhanu, Indra, Lokakijna and Saura.

New name for palantaccan

The meaning of *taksa* is given in *silpasastras*. He is called so because he sculpts enormous pieces of stone, wood etc. This definition has a new perspective.

Team of Silpis:

It will be pertinent in the present context to look into the education, technical and general aspects of *sthapati*, *sutragrahi*, *vardhaki* and *taksa*.

Sthapati
(Chief Architect and Designer)

Sutragrahi (ilantaccan)
(Excecutive Architect and Marker)

Vardhaki	*Taksa*
(Joiner)	(Carver)

All the four are basically *silpis* as the adage is *Sthapati caturvarnaha silpibhi.* By virtue of his better educational status and experience the *Sthapati* is entitled to be *guru* (preceptor) of the other three. That is to say he is the *acharya*. Epigraphs call him *tatacharya* and the *agamas* *silpacharya*.

Let us now study the qualifications and character of those engaged in art creations, basing our account on Maya and Manasara.

Sthapati's responsibilities and jobs;

The job of the *Sthapati* is one which involves intricacies of the arts. Arts characteristics and technicalities are involved in it. He has to appoint and guide subordinates. He has to work with them. He has to monitor. He being the *Sthanatipati* is called *Sthapati*. His qualifications:

Vedavit:	proficient in the *Vedas*
sastrapargaha:	proficient in the arts
Sarvasastrajna:	an exponent of the texts: *Vastu*, *agama*, and philosophy.
Vastuvidhyabdhi pargaha:	an exponent of architecture.
Manavit:	well versed in metrical science, i.e., measurements
citrajnaha:	an exponent in paintings and sculpture
ganitajnaha:	an exponent in mathematics
puranajnaha:	proficient in history, ancient arts and *itihasas*
Sarvadasajnaha:	who has visited the foreign countries and acquired knowledge of them and he is the master of *sutragrahi*, *vardhaki* and *taksa*.

The Conduct and Character of Sthapati:

abhijavavan:	born of a good family.
arogi:	hale and healthy
sunana:	has earned a good name
ditabuddhi :	of sound wisdom
nahinangaha:	without any deformity
atirivtangaha:	without any additional (physical) organs (may be such as six fingers in a hand etc.-tr.)
dharmikaha:	the duty - conscious
dayapāraha:	the merciful one
sadahasyaha:	the always happy one
sapavyasanavarjitaha:	The sarrowless one
amatsaryaha:	the jealousy-less one
anasuyaha:	one having no repugnance
Satyavan:	the truthful one
jitendrivaha:	one who has controlled the senses.

All the *sastras* insist that the *sthapati* should posses all the qualifications and character. Because he is the creator. He has to realise his responsibility and position and act accordingly. To be brief, is a noble job and so he should be a noble man in all walks of life. Because as is the aim, so is the way.

Sutragrahi

He is an exponent of iconometry and architectural measurements.

Sutragrahi	an expert in measure
Sutradhut:	ments science
srutajnaha:	conversant with the *vedas*
rekhajnaha:	who can tie the thread and draw even on minute objects
Sastravidvaha:	well versed one

Vardhaki

He is an expert in assembling and joining objects.

srutajnaha:	conversant with the Vedas
vicarjnaha:	a researcher
citrakarna-jnaha:	an exponent in drawing

taksa

The direct meaning is one who chips or sculpts.

karnavit:	a craftsman
srutisastrajnaha:	well conversant with the *vedas*
Sabhayaha:	the simple one

What is important in all the four are basically *Silpis*. That is to say, all are experts of the craft. *Sthapatyadi catur-varnaha silpibhih parikiritaha*. All are educated. This is the *Manasara* version to be kept in mind. Each has his own jurisdiction and performs the job with leadership. Under the command of the *Sthapati* the other three function. In practice the *Sthapati* works along with others. He has to provide the guidelines and demonstrate if needed. He is responsible for the community work.

Another important point is that the leader is one. He is the *Sthapati*. The assistants are many. There are many *sutragrahis*, *vardhakis* and *taksas*. For example the chief architect of the Tanjai Peruvudaiyar Koyil (Brahadisvara Temple, Thanjavur) was Kunjaramallan Rajaraja Peruntaccan. Under him some 80 *sutragrahis*, 20 *vardhakis* and 2000 *taksas* must have worked. That is,

sthapati:	1
sutragrahis:	80
vardhakis:	20
taksas:	2000

The proportion is 25 *taksas* for a *sutragrahi*. The works produced by 180 *taksas* must be fitted into a unit by a *vardhaki*. The latter may have assitants also.

Another important imformation is that till some 100 years back all the *silpis* constituted a community. For 80 *sutragrahis*, there was a chief *sutragrahi*. Mostly he was the son of the *Sthapati*. What the *Mayamata* calls on *sutragrahi su dothva* was the *Sthapati* in making. The 20 *vardhakis* and 2000 *taksas* were not independent groups. They had no leaders of their own. So all were under the direct control of the chief *sutragrahi*. This is another instance of craft bureaucracy.

The *Sthapati* was to begin with a *taksa*, *vardhaki* and *sutragrahi*.

So the *Sthapati* is:	Chief Designer and Director General holding overall responsibility over the architectural beauty and structural stability of the project.
the *Sutragrahi* is:	Chief executor having control over different minor groups of *taksakas*, the carvers. He will also supervise and guide the work of *vardhakis*, the joiners.
The *Vardhaki/ taksa is:*	*Vardhaki* assembles into a building all finished arts, attempted by carvers. He is the actual builder.

To be brief the *Sthapati* is the designer, the *Sutragrahi* executive, *Vardhaki* maker and *taksa* carver.

The Practical side of the job:

Let us have a practical view of the problem. Let the construction be a temple or an ordinay building. The following have to be minutely observed:

1. (a)Location of the Site
   (b)Environment
   (c)Structure of the soil
   (d)Orientation *(manai nokku?)*

(2) Financial position

(3) Structure of the building :	length, breath and height — architec tural (exterior) and structural (interior) aspects - integral parts of the edifice -technicalities- artistic intricacies - sculptures - decorations

The *Sthapati* is the one who gives shape to an art piece bearing in mind all the above aspects. All the qualifications prescribed and character expected of him have relevance to his work. In olden times all the texual knowledge and experience were stored in the *Sthapati's* mind. At the working stage, they poured out and acquired a form. Till it reaches fruition we have to wait and see.

Now the conditions are not like that. Raw materials and equipments are plenti fully available and easily procurable. One can enjoy the final output even at the draft stage. Models are also produced. Techniques, intricacies and anatomical features are fixed under this stage. The next stage is only implementation. Now the art creating process is divided into many units. The smaller units reach the hands of *taksas*. The six dimensional marking is done by the *sutragrahi*.

Marking:

The markings for sculpture works are done by *sthapathis*. The term "marking" signifies what the *Sthapati* has conceived in his meditation about an art work. The drawing is only an external act Even if the *taksa* is an independent worker he is expected to get the marking done by an *acharya*. This is evident from the Pallava sculpture at Mahabalipuram. The entire range of sculpture in the Arjuna Penance would appear as though sculpted by one individual. It is not so. The markings alone were done by one individual while actual cutting was done by so many sculptors. Markings enable in arriving at uniformity in a school. This is the basis of style formation. As in literary works, style acquires a rhythm. It avoids the entry of alien elements. The system continues. It is inevitable.

All *Silpis* cannot be uniformly skilful. Skills differ. When guided by a master craftsman the deficiencies of idnvidual artists are rectified or averted. For works undertaken on large scale basis, the *sthapati*-centric system is a must. This is our ancient custom. In the western countries it is not like that. There the individual shines.

It would have taken centuries for a single artist to work out a Mamallapuram. At this juncture we may note another fact. In the construction of a temple, apart from the buildings, icons in metal, wood and stucco are lodged. These are also guided by the same chief. That is why the sculptural style acquired a unformity in fashion. Later this helped the archeologists in the identification of styles. Otherwise there would have been lot of confusion.

The interval and renaissance:

At the dawn of the 20th century, the old system dwindled. The artists melted into individual groups in tune with the western model. No large scale work was undertaken during that period. Later a renaissance set in. The old order is reviding. Now the old order seems to have set a strong footing.

The old order is the best order if the imaginations of a Master-Craftsman are to be translated into an art work. One cannot absorb the imaginations of the other. This is the basic philosophy behind the whole thing. For an excellent creation the culture of the artist is the basic factor. The outburst of what is stagnant in imagination is art. So a cultured artist stands almost alone as a star. Training without education and education without training are both useless. An expression without proper culture-formation won't be of any use in art. That is why the master-craftsman was called *nularipulavan*.

The final output of Nayak sculpture reflects the maturity in technique but lags behind in aesthetics The reason for that might have been the absence of artists with imagination in spite of textual knowledge. We cannot say that the mastery dwindled due to lack of patronage. Culture of mind having been in the receding trend, it was gravely neglected. A cultured mind and consummate skill are essential prerequisites for noble productions. Again the mingling of a *peruntaccan* of cultured mind with assistants of cultural skills leads to the creation of things par excellence.

ADHIṢṬHANAS OF THE VARIOUS STRUCTURES OF THE NAṬARĀJA TEMPLE AT CHIDAMBARAM

Velusamy Sudanthiran

The main parts of the temple are six in number beginning with the *adhiṣṭhana* (the basement) and ending with the *sthupil* (the final).

The above division does not include the *upapitha* in the height of the temple. The height is measured from the basement to the finial exclusive of the *upapitha* which may be built if desired, below the basement. Thus in the architectural division of an Indian temple, the basement forms the first member. The term, *advanga* which is employed as a synonym of *adhisthana*, clearly indicates that the *upapitha* is excluded from the list of the principal members of architecture. *Adhisthana*, it is further stated may be built with or without a *upapitha* below.[1] Gurudeva plainly speaks of the optional character of the *upapitha*.[2]

The option allowed in the case of the *upapitha* indicates that it is not an indispensable member like the main constituent parts, *adhisthana* (Basement), *pada* (Pollarp), *prastara* (entablature), *grva* (the neck of the dome) *sikhara* (cupola) and *stupi* (*pinnacle*).[3] Here also *upapitha* is not mentioned as one of the main parts.

The term *adhisthana* is derived from the root *stha* (to stand) preceded by the preposition *adhi* (upon). It denotes the object on which the edifice rests. The *adhiṣṭhana* thus is the lowest member of a building, the first from bottom upwards as the synonym, *advanga* indicates. It is the strongest, firmest and the most solidly laid and carries the weight of the remaining parts of the structure built above. *Masuraka*, *vastvadhara*, *advanga adhara*, *tala* and *kuttima* are some of the synonyms of *adhisthana* stated in Silpasastras. The synonyms are given in the Gurudeva-padhati and *Kāsyapa-silpa*. *Paduka*, *jagati*, *kamuda*, *gala*, *antari*, *kampa paṭṭika* or *paṭṭa*, *prati* and *vājana* are the various mouldings.

The classification of *adhisthana*, into different types is mainly based on the basis of difference in dimensions of its mouldings or the presence of absence of one or other of its mouldings.

The Main Parts of *Adhiṣṭhana*

a. In architectural texts, it refers to as the lower mouldings of the basement of the pedestal. In the *Kāsyapiya*, it is considered as one of the main mouldings.[4] But the *Kāsyapiya* and *Silparatna* state that the *paduka* is an optional moulding. This part is otherwise known as *upana*.

b. ***Jagati***

This mouldings of the basement is rectangular in form. Frequent mentioning of this moulding is found in the *Kāsyapa-silpa, mayamata, mañ Jari, gurudēva-paddhati* etc. In the *manasara* there is no mentioning of this moulding.

c. ***Kumuda***

This portion corresponds to the astral or torus of western architectonics.[5] *Kāsyapiya* mentions two forms of *kumudas* namely circular and octagonal based on their shapes. In the *kasyapiya*, it is stated that in the *pratibandha adhiṣṭhana* the *kumuda* is circular.

In the *padabandha adhiṣṭhana kumuda* moulding is octagonal in size. The *manasara* states that in the case of *kumuda-bandha adhiṣṭhana* the *kumudas* may either be circular or triangular or hexagonal or octagonal. The *Tantrasamuccayavivarana* states that *kumuda* is mainly circular in form. The *Silparatna* says that in the *mañcabandha adhiṣṭhana kumuda* portion is absent.

d. ***Gala***

It is also called *kandhara, griva* and *kantha*. Literally *gala* means the neck. Ram Raz says that this part played as a link, connecting two mouldings.[6] A Malayalam commentary on the *Tantrasamuccaya* accepts the view that this portion gala has neither projection nor recession.[7]

e. ***Antarita***

It acts as a link between two mouldings. According to K.Damodaran Nambutirippad and K.Nilakanthan Acari, this part is similar to *gala* and according to them, it has neither projection nor recession. But Ram raz is of the opinion that the part *antarita* has projections or recessions[8] like a *linga*.

f. ***Kanda***

It is also identified with gala.

g. ***Kampa***

It acts as a link between two mouldings.

h. ***Paṭṭa or Paṭṭika***

Its flat moulding gives chance for the ornamental motifs like makarasya, simha etc. sometimes, there may arise a chance for the repetition of this moulding. If that is

the case, then the upperband is known as *urdhavapattika* and the lower band is *addhara-pattika*. Based on height and projection, the portion *pattika* is again divided into two, namely *mahapattika* which has greater height and projection and *ksudra pattika*, which has smaller height and less projection. Sometimes this part *pattika* acts as the topmost moulding of the *adhisthana*.

i. *Prati*

In some cases this moulding acts as a crowning part. Generally, this moulding appears in association with *vājana*, the crowning member, and is present below *vājana*. In height, *prati* is greater than *vājana*. *Kāsyapasilpa* and *Mañjari* locate this part just below *vājana*. But in the *pratyutpanna-krama adhiṣṭhana*, this part *prati* is placed above *vajana*.[9]

j. *Vājana*

In the *padabandha adhiṣṭhana* this moulding acts as the crowning member. It is rectangular in form. It has greater projections. It's dimension is also great in size.

Main Parts of *Adhiṣṭhana* as Described in the Texts

Kāsyapiya mentions *pāduka*, *jagati*, *padma*, *kumuda*, *kumbha*, *gala kanda*, *kampa*, *ālinga paṭṭa* or *paṭṭika prati* and *vājana*. *Mayamata* mentions *janman*, *vapraka*, *jagati*, *kumuda kumbha*, *kapota*, *Kandhara*, *(synonym of gala) antari*, *kampa*, *ālinga paṭṭa* or *pattika*, *pratimukha* and *vājana*, *Mañjari* mentions *paduka*, *jagati*, *kumuda*, *gala*, *antari*, *ālinga*, *paṭṭika*, *prati-mukha* and *vājana*. *Gurudeva* mentions *jagati*, *padma*, *kumuda*, *gala antari*, *kampa*, *ālinga*, *paṭṭika* and *vājana*. *Mānasāra* mentions *pāduka*, *vapraka*, *padma*, *kumuda*, *kumbha*, *kapōta*, *gala*, *antari*, *kampa*, *ālinga*, *paṭṭa paṭṭika*, *prati* and *vājana*.

Some of the mouldings have synonyms *pāduka* is referred to as *upāna*, *Padma* as *ambuja*, *kamala* as *pankaja* or *abja*, *kumbha* as *ghata* and *kalasa*; *gala* as *kantha* and *kandhara*. Mouldings *karna*, *gopana*, *kse-pana*, *amsa*, *nimna*, *argala*, mentioned in the *Mānasāra*, have no place in the works like *Kāsyapa*, *silpa*, *maya mañjari* and *gurudeva-paddhati*. According to *Tantrasamuccaya*, *pratyutpannakrama adhiṣṭhana* contains twelve parts.

The Types of Basements as Found in the Texts

Mayamata mentions 14 types. They are *pādabandha*, *vgrabandha*, *pratikrama*, *padmakesara*, *puspa-puskala*, *sribandha*, *mañcabandha*, *srekanta*, *srenibandha*, *padma-bandha*, *vaprabandha*, *kapotabandha* and *kalasabandha*. *Kasyapa silpa* mentions 22 types. They are *pratibandha*, *pādabandha*, *prati-vaktra*, *pretikrama ambho jakesara*, *puspapuskala*, *sribandhanta*, *mañca-mantha*, *srikanta*, *srenibandah*

abjabandha, *vaprabandha*, *pratisundara*, *srikanthenta*, *karirabandha* *kalasabandha*, *srikara*, *sundarambuja*, *nalinakanta*, *srisaundarya* *skandaskanda*, and *ambujakanta*.

Mañjari mentions two namely *pādabandha* and *pratikrana*. *Gurudeva* refers to 8 types. They are *pādabandha*, *vaprabandha*, *Carubandha*, *puskala*, *pratibandha*, *vagabandha*, *srikanta* and *kapotabandha*..

Mānasāra mentions 64 different sorts under 19 types. They are *pādabandha*, *ugrabandha*, *pratikrama*, *kumudha bandha* *padma kesara puspapuskala*, *sribandha*, *mañcabandha*, *srenibandha*, *padmabandha*, *kumbhabandha*, *vaprabandha*, *vajrabandha*, *sribhoga* *ratnabandha*, *pattabandha*, *kaskabandha*, *kampabandha* and *srikanta*.

Adhiṣṭhanas of the Various Structures of the Naṭarāja Temple at Chidambaram:

a. *Adhiṣṭhanas* of the *Gōpuras*

The features found in the *adhiṣṭhanas* of the outer *gōpuras* are similar with one another. One can notice an improvement in the position of *adhiṣṭhanas*, which are found in two stages. In the Tanjore a Big Temple, one can notice, two divisions, namely upper and lower bases in the *vimana* structure. Presence of two stages of *adhiṣṭhanas* depict a development in the construction of the *gōpuras*. During the early *Cōla* period, no such improvement is present in the *gōpuras*. In the Naltunai Isvaram Temple at Punjai, no such feature is present in the *gōpura*. Even in the Middle *Cola* temple, no such development was present. The *adhiṣṭhanas* of the four *gōpuras* come under the variety called *Utamottama adhiṣṭhana*, as mentioned in the *Mānasāra silpa*.

The *adhiṣṭhana* contains the following parts namely *upāna*, *jagati*, *kumuda*, *kanda*, *paṭṭa* or *paṭṭika*, *kanda* and *kapōta*. The *kanda* portion contains Bhutagana figures in various postures. Creeper designs are also present. The *vudus* of the *kapōta* portion, inside contain figures of dancing vinayagar, swans, Bhutaganas holding *canka* and flute in their hands. It comes under *kapōtabandha adhiṣṭhana variety*.

b. *Adhiṣṭhana contains upāna*, *jagati*, *padma*, *kantha*, *galapada*, *tripaṭtakumuda*, *kantha* with *galapade* and *kapōta*. The *galapade* portion contains no artistic designs. They are plain; the *kudus* inside contain human head designs. It comes under *pratibandha* variety.

c. *Adhiṣṭhana* of the Inner *Prākāra* of the Natarāja Shrine

This *kapōtabandha adhiṣṭhana* contains *upāna*, *jagati padma*, *kapōta*. The *Kantha* portion contains dancing ladies in various poses. *Koṭikkarukku* (creeper) designs are present in the *galapada* portion. *kapōta*

with *kudus* add beauty to the *adhiṣṭhana* structure. Outer surface of *kapōta* cotnains *koṭikkarukku* designs.

d. *Adhiṣṭhana* of the Nataraja Shrine

It contains *upāna, jagati, padma, kantha, kumuda* with curved edges *(Kaṭakavrta Kumuda) prati, kantha, galapada* and *kapōta*. At the end of the *vyali* frieze is present *Vyali* riders, who hold knives and swords. The outer surface of the *kapōta* portion contains *koṭikkarukku* designs. This *adhiṣṭhana* comes under *kapōta-bandha* group.

e. *Nritta-mandapa Adhiṣṭhana*

Adhiṣṭhana contains *upāna, jagati, mahāpadma, kantha,* and *kapōta* and *praṭṭi (vyali* frieze). *Galapada* portion creepers are present bas-relief figures of rsis who are in *anjali* poses also present. The *kudus* of the *kapōta* portion contain, bas-relief figures of dancing ladies in various poses. Some of them carry musical instruments. End of the *vyali* frieze contains makaramukha. where there are bas-relief figures of soldiers, who carry swords and shields. Some figures have human heads and animal bodies. The lower portion of *kapōta* contains disc like designs. The vrddhagirisvara temple at Vrddhacalam contains the above disc like representation in the *kapōta* portion. This *adhiṣṭhana* comes under *srī-bandha adhiṣṭhana* variety.[10]

f. *Adhiṣṭhana* of the *Amman Shrine*

It contains *upāna jagati, vrṭṭa-kumuda* with *ksudra padma* and *adhahpadma, kantha* with *galapada* and *kapōta*. *Kudus* of the *kapōta* portion contain flower designs inside. It belongs to the *kapōdabandha* variety.

g. *Adhiṣṭhana* of the Thousand Pillared *Mandapa*

Adhiṣṭhana contains *upāna, jagati, vrṭṭakumuda* with *ksudra-padma* and *adhapadma kantha* with the bas-relief figures of Bhutaganas, *kapōta* with *chaitya kudus, prati (vyali* frieze) *Kantha* with the bas-relief figures of Bhuṭaganas and *mahapaṭṭi*. On the eastern and western walls there are life sized elephant figures covering the portion from *upa-pitha* to *mahāpaṭṭi*. This *adhis-thana* comes under *kapōta-bhandha* variety. One can notice a similar type of *adhiṣṭhana* in the Brahmapurīsvara temple at Pullamaṅgai.

h. *Adhiṣṭhana* of the *Nandi-mandapa*

Adhiṣṭhana contains *upāna, padma, jagati, vrṭṭakkumuda* with *adhahpadma* and *ksudra padma*, and *praṭṭi* (vyali-frieze) This *adhiṣṭhana* comes under *praṭi-bandha* variety.

i. *Adhiṣṭhana* of the Front *Mandapa* of the Muruga Shrine

Adhiṣṭhana contains the following parts namely *upāna, jagati padma, kantha, kumuda* with line drawings, *kantha* with the bas-relief figures of *bhūtaganas* and the dancing ladies who carry musical instruments like *maddala, udukkai,* flute etc. *Kudus* of the *kapōta* portion contain human heads, *Bhūtaganas,* flower designs inside. This is *kapōtabandha adhiṣṭhana.* Similar kind of *adhiṣṭhana* is present in the Kampaharēsvara temple at Tribhuvanam.

j. *Adhiṣṭhana* of the *Prākāra* of *Amman* Shrine

It consists of *upāna, jagati, maha-padma, kumuda* with *adhah padma, ksudra-padma, kantha* with the bas-relief figures of Bhutaganas. and *kapōta* with incomplete *kudus,* line drawings are present in the *kumuda* portion. This also comes under *kapōtabandha* variety.

Appendix No I. shows light on some observations gleaned about the *adhiṣṭhanas* of the Chidambaram temple; Appendix II illustrates the plan of *pādabandha adhiṣṭhana* in general. Appendix III illustrates the plans of the various *adhiṣṭhanas* of the various structures of Chidambaram temple.

APPENDIX I

Some of the points could be observed from the study of the structure of the Chidambaram temple.

1. The bas-relief dancing fiugres present in the *kantha* portion of the *adhiṣṭhana* of the *prākāra* wall of the *Amman* shrine and of the *mandapa* of the Murugan shrine indicates their relationship with the main deity. As the main deity Naṭarāja itself is in the dancing form, it is reasonable to say that the sculptures in the *adhiṣṭhana* portions are carved with relations to the main deity. Even the Bhutaganas present, in the *kantha* portion are in different dancing postures.

2. The styles of the *adhiṣṭhanas* helped so much to date the *adhisthanas* of the Chidambaram temple. Most of the *adhiṣṭhanas* come under *kapōdabandha* variety. Normally, based on views expressed by Meister in his II Encyclopaedia on Indian Temple architecture, it seems that the *adhiṣṭhanas* of the *Kapōtabandha* variety belonged to a later period. There may be exception like the *adhiṣṭhana* of the *Brahma purtsvara* temple at Pullamangai, which is of an early *Cōḷa* temple. The *Karukkuppaṭṭai* designs, on the surface of the *kapōta* as well as the disc representations on the edges, indicates

the *adhiṣṭhanas* to a later period. The bas-relief figures like dancing ladies also suggest a late period. The line drawings present in the *kumuda* portions normally suggest a late period representation, even though there are some exceptions as suggested by S.R.Balasubramanyan. The presence of two stages of the *adhiṣṭhanas* also indicate a late period representation.

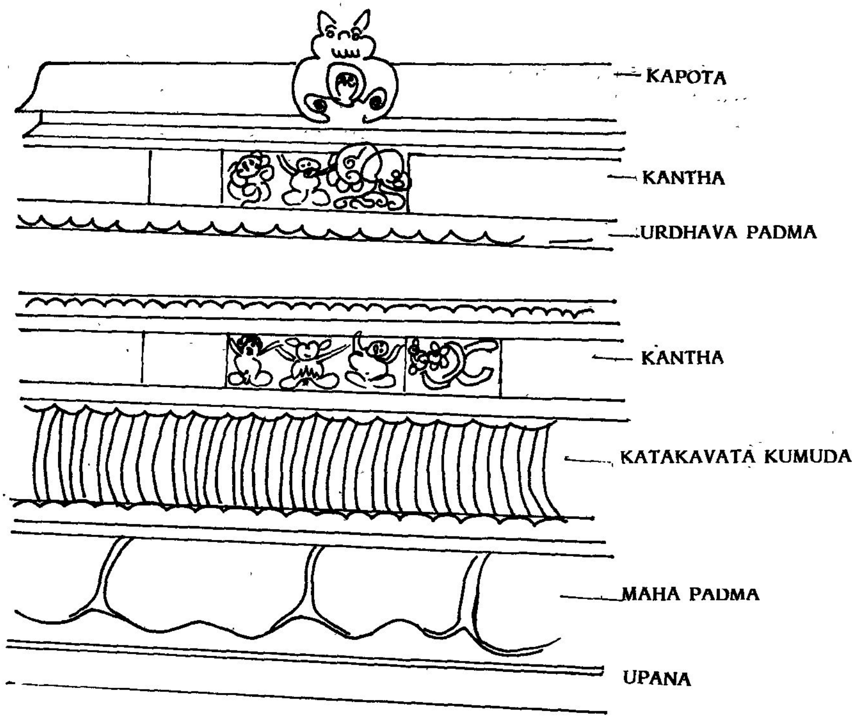
3. Most of the *adhiṣṭhana* of the Chidambaram temple could be classified under the *kapotabandha* variety mainly based on the presence of the *kapōta* portion.

4. The text relating to architecture do not mention the characteristic features of each and every *adhiṣṭhana* clearly -- Moreover they do not also indicate the periods of different *adhiṣṭhana* varieties.

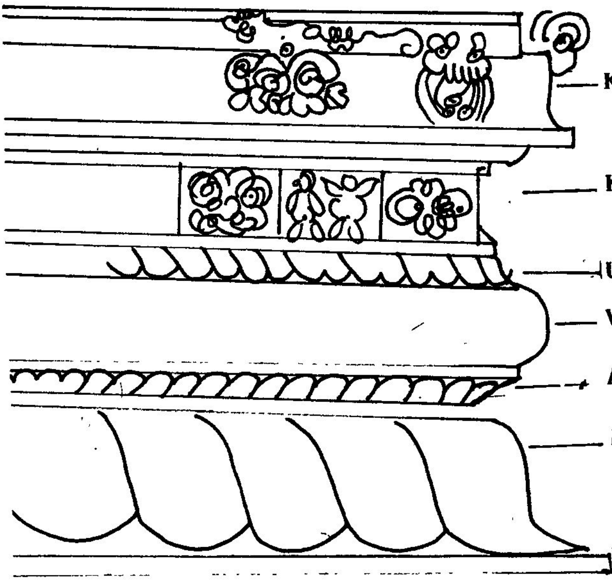
NOTES

1. *Mayamata*, ch. XXII, V.33.
2. *Isanagurudevapaddhati Uharardha*, Ch. XXX, V.68-9.
3. Ram Raz, *Essay on the Architecture of the Hindus*, p.52.
4. Kasyapasilpa, ch. VI, V.22.
5. Ram Raz, *op.cit*, p.23.
6. *Ibid*, p.25.
7. Government Oriental Mss. Library, Madras, Ms.R.No.4128.
8. Ram Raz, op.cit., p.25.
9. N.V.Mallaya, *Studies in Sanskrit texts on Temple Architecture with special reference to Tantrasamuccaya*, 1949, p.182.
10. Michael, W. Meister, *Encyclopaedia of Indian Temple Architecture*, Oxford 1983, p. 168.

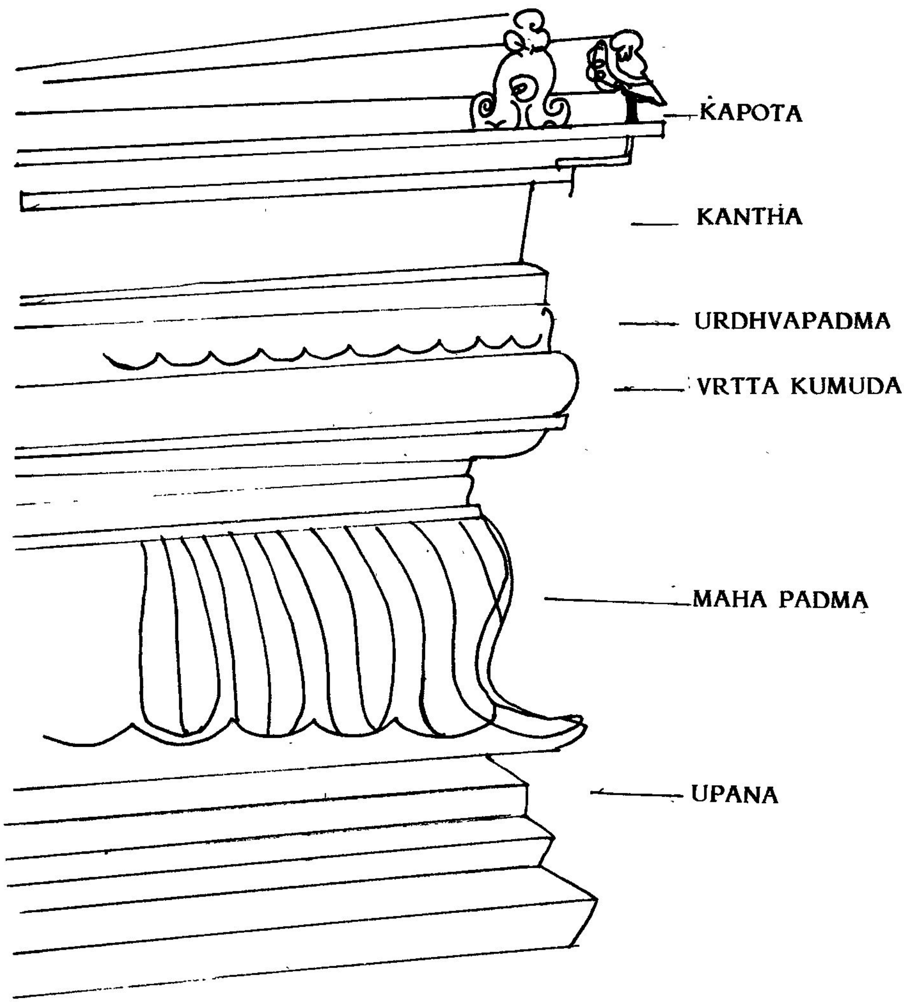
ADHISTHANA OF THE EASTERN GOPURA



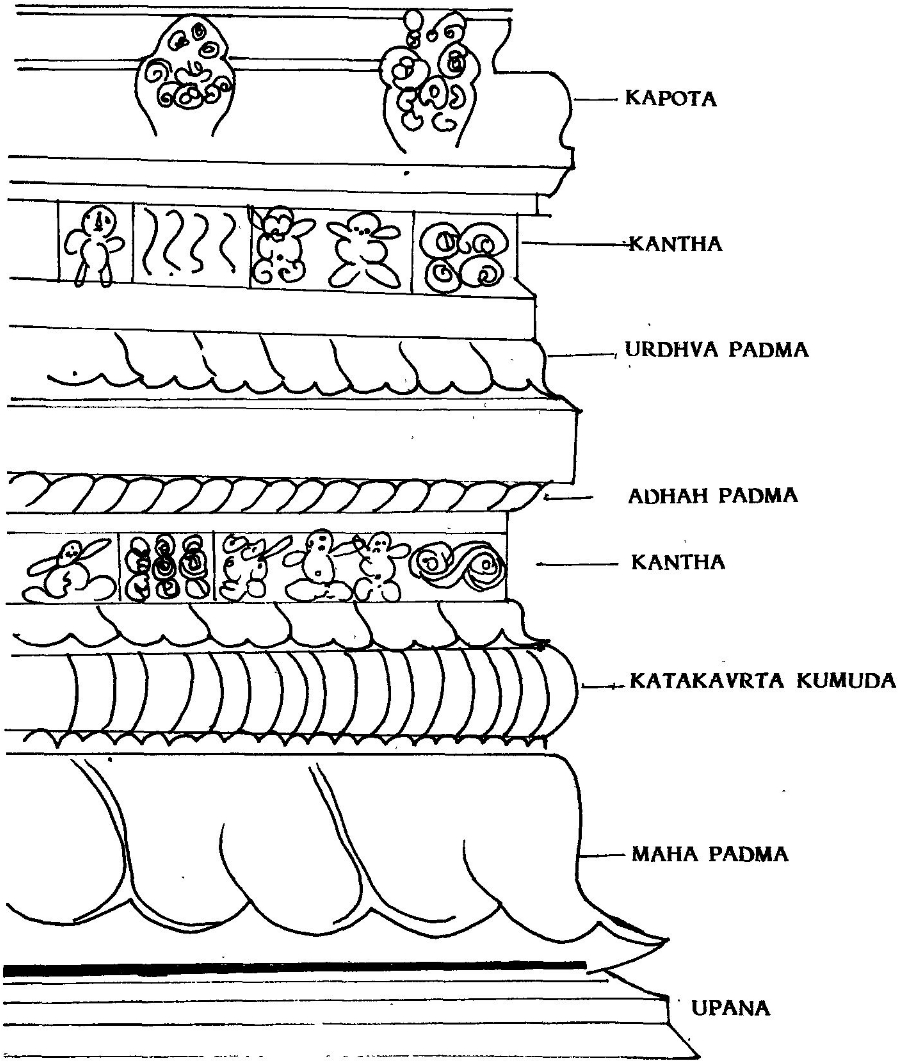
ADHISTHANA OF THE NRITTA MANDAPA



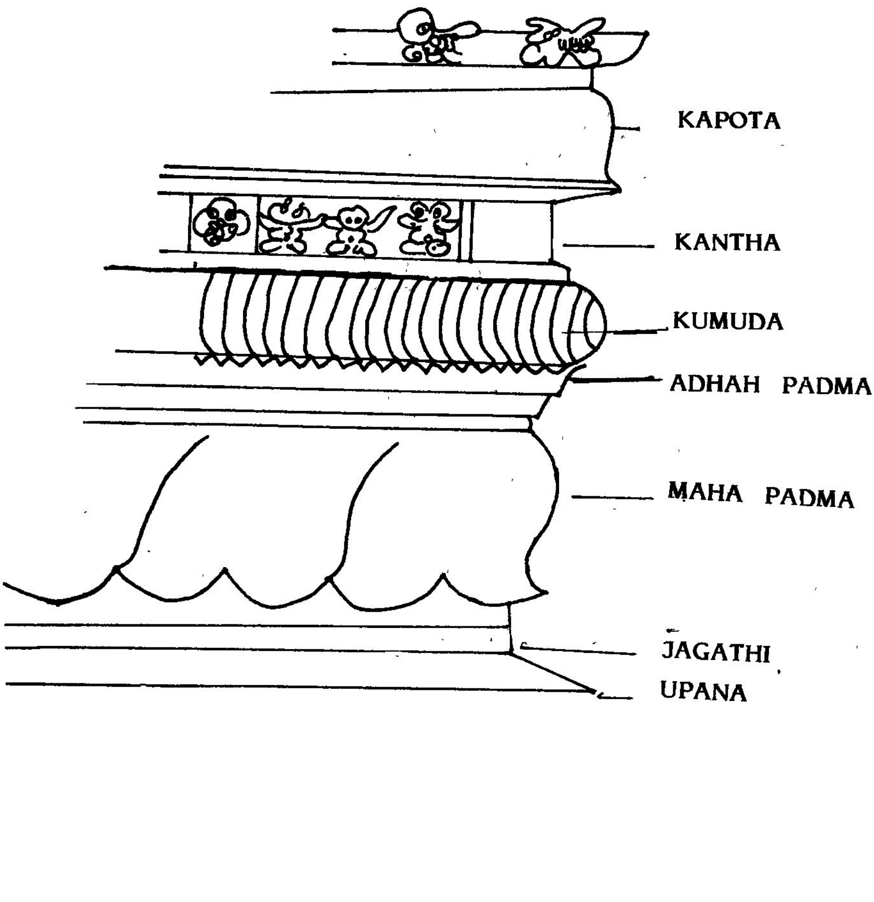
ADHISTHANA OF THE PRAKARA OF THE AMMAN SHRINE



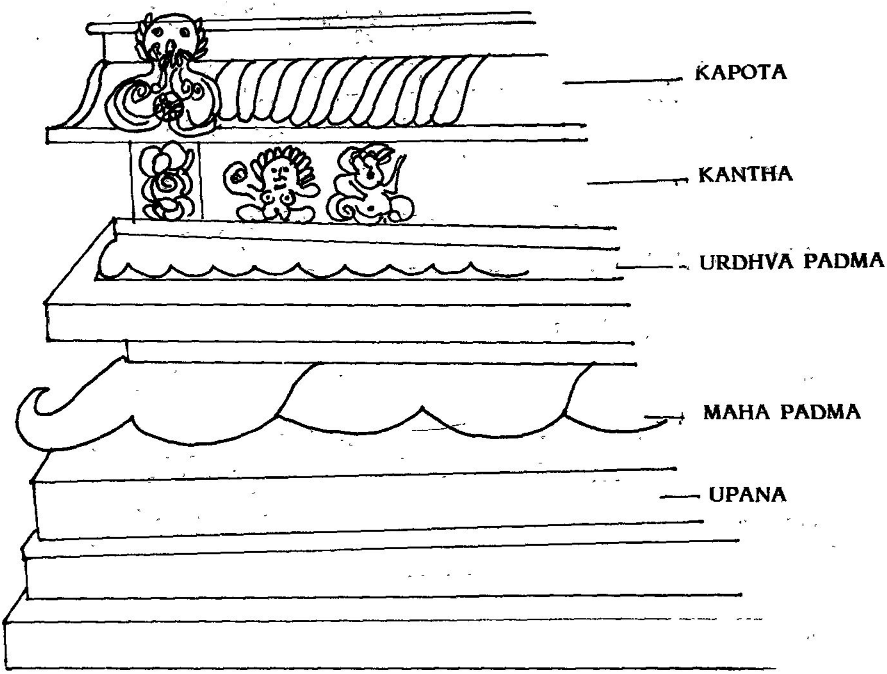
ADHISTHANA OF THE SOUTH GOPURA



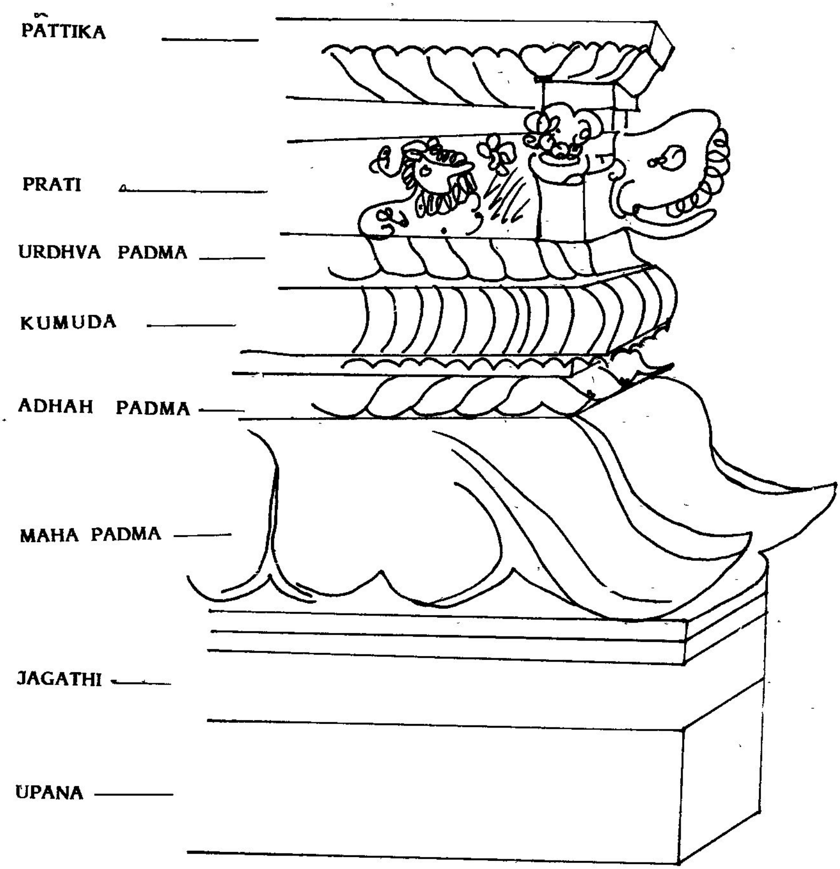
ADHISTHANA OF THE FRONT MANDAPA OF THE MURUGAN SHRINE



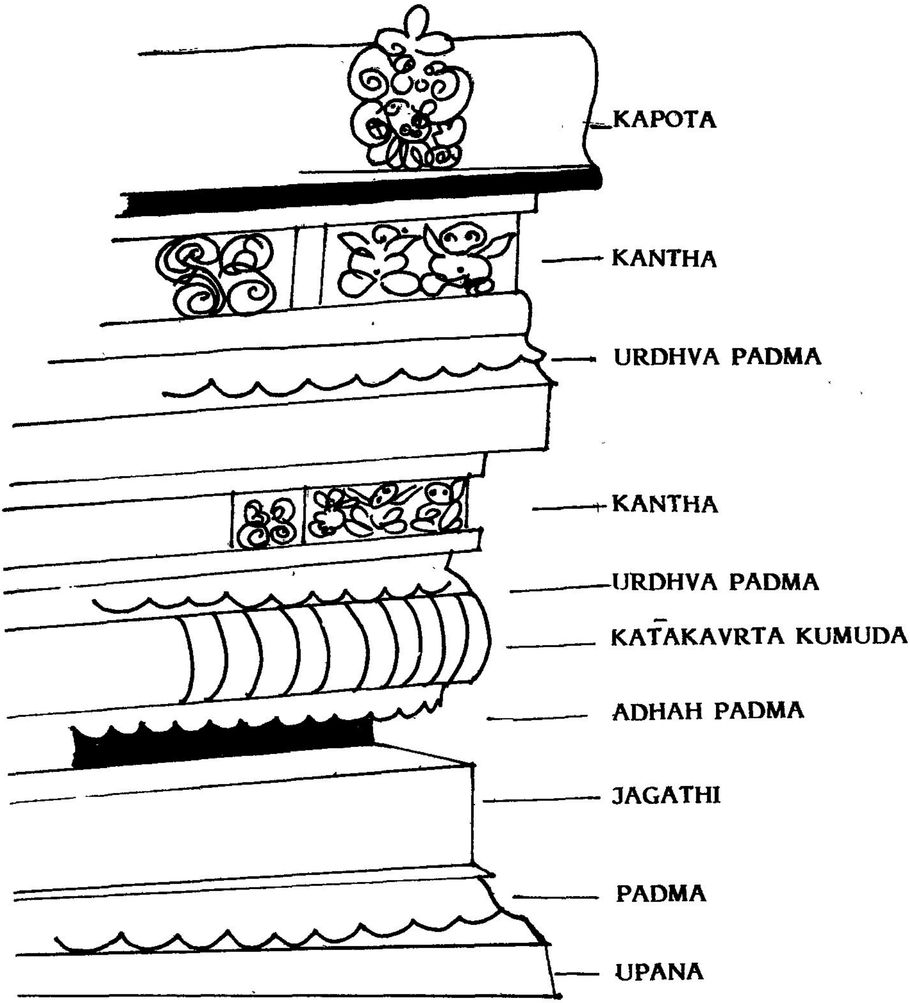
ADHISTHANA OF THE VINAYAKA SHRĪNE
IN THE OUTER PRAKARĀ



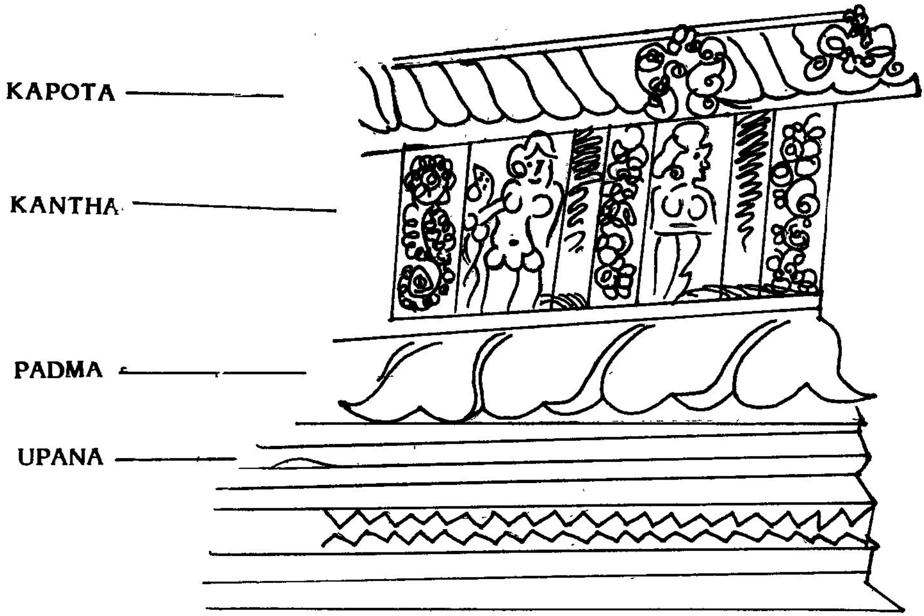
ADHISTHANA OF THE NATARAJA SHRINE



ADHISTHANA OF THE NORTHERN GOPURA

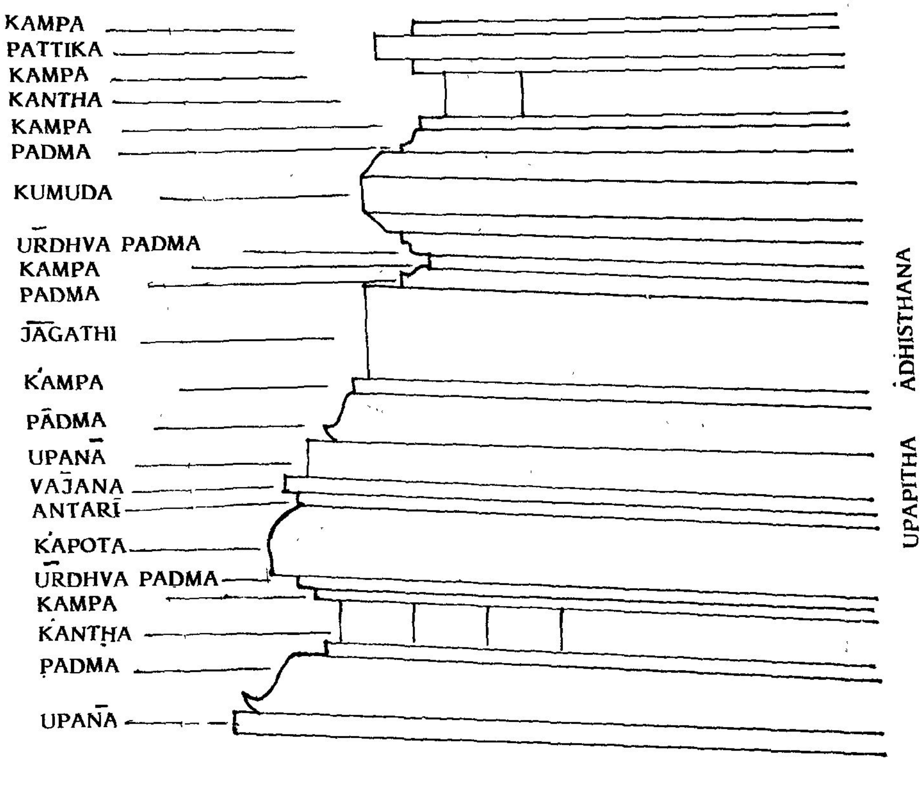


ADHISTHANA OF THE INNER PRAKARA OF THE NATARAJA SHRINE

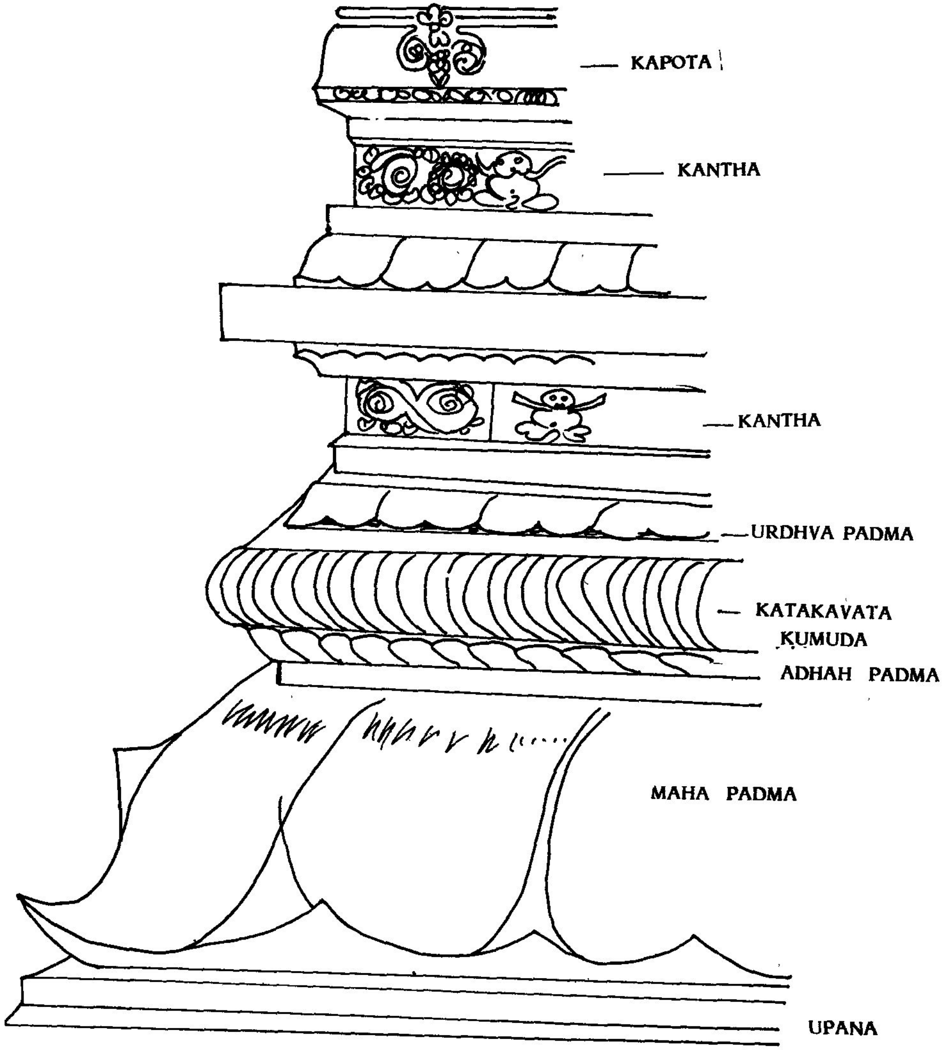


APPENDIX II

PADABANDHA ADHISTHANA



ADHISTHANA OF THE WEST GOPURA



TEMPLE DOOR OF BRAHMADEŚAM ŚIVA TEMPLE

G.Vijayavenugopal

Location:

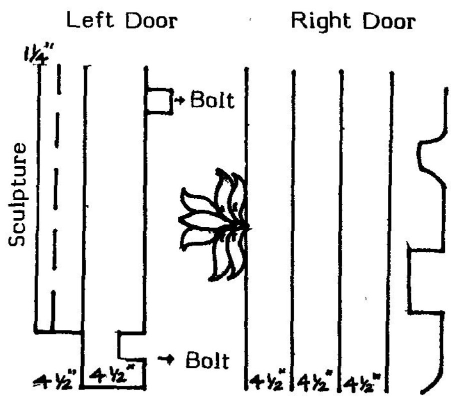
Brahmadesam is (a small village) about 7 kilometres from Ambāsamudram in Tirunelvēli district. There is an ancient temple dedicated to Kailāsanātha. There are two more villages adjacent to Brahmadesam, viz., Tiruvālīśvaram and Maṉṉārkōyil, each within two kilometres. All these three came under a *brahmadeyam* called Rājarājaccaturvetimaṅgalam. This was also an important military centre where Rājarāja I and his successors had maintained an army similar to the one at Kōṭṭāṟu near Nagercoil. This Cōḻa army was referred to as *Mūṉṟukaimakācēṉai* 'a three-pronged great army'.

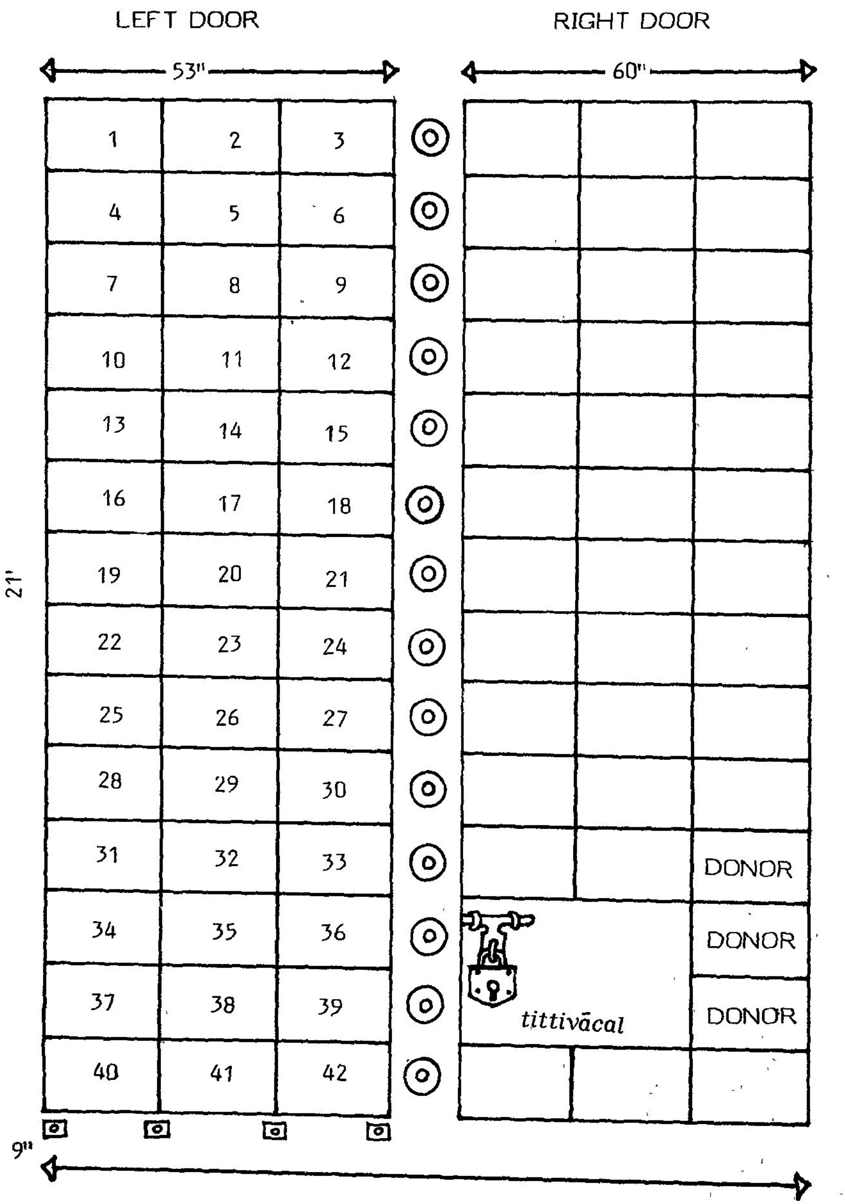
Temple:

The temple is dedicated to Kailāsanātha and according to S.R.Balasubramaniam (1975:200) this "came into existence during the days of Cōḻa occupation". However, this can be dated still earlier because one finds, on iconographical grounds, a pair of early Pāṇḍya *dvārapālakās*. Probably the Cōḻas might have done renovation work. The earliest inscription (which is in *Vaṭṭeḻuttu),* found in this temple, belongs to Rājarāja I. According to S.R.Balasubramaniam (1975:200) the present day temple belongs to late 15th century A.D. The seven storeyed *gopuram* which stands in front was built during the period of Vīrappa Nāyaka, son of Krishṇappa Nāyaka, and datable to 16th century A.D. However, the two main wooden doors found attached to this tower-gate with which the present paper is dealing, do not belong to this period. The portrait figures found on the doors do not suggest the association of Kings but some chieftain. Hence the period of the door could be dated to the late 18th century A.D.

Temple doors:

Though a photo of these doors is reproduced by S.R.Balasubramaniam (1975:pl.171) nothing has been said about this. The wooden doors are 21 feet high and 5 feet in width each. As for the thickness of the door, the left door has two layers of wooden plank each measuring 41/2".




LEFT DOOR
RIGHT DOOR
53"
60"
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15
16 17 18
19 20 21
22 23 24
25 26 27
28 29 30
31 32 33
34 35 36
37 38 39
40 41 42
21'
DONOR
DONOR
DONOR
tittivācal
9"

The right door consists of two layers each measuring 41/2" and 4" and in addition it has a 41/2" thick pole on the top of the door serving as a cover. Besides, on the back there is an attachment serving as the bolt. The right door consists of a small door, called *tiṭṭivācal* 'wicket', used as temporary and/or emergency exit and entry. Each door consists of 14 equally divided panels and each panel consists of three miniature wooden sculptures carved as bas-relief. Thus one gets 140 sculptures leaving out 4 which are left out to make the wicket. Each panel is more or less 12"x12" of size. On each corner of the panel one finds ornamental knobs made of iron which are shaped like fully bloomed lotuses. In the middle it is shaped like a lotus and with a sharp end. It is really an irony that a thing used for defensive/offensive purposes is shaped like a tender lotus.

Among the total of 140 sculptures I could identify only around 110. A much closer analysis is necessary.

Interpretation:

In the absence of references about the making of temple doors and the theory behind arranging the sculptures, one has to follow a new method to study them. An attempt has been made here to interpret these in terms of the theory of semiotics or sign production. However, certain general patterns or rules emerge when one closely examines the arrangement of these sculptures. The two lower panels found on the left and right doors depict erotic scenes. As such, these resemble the pattern followed in constructing a *gopuram*. It seems that one has to view these panels from left to right, since Vināyaka is found as the left most panel on the third tier of the door. If one proceeds like that, one comes nearer the panels (tiers 2 and 3) depicting the donor of the doors found near the *tiṭṭivācal*. Probably this suggests the practice of erecting the donors' portrait sculptures near the entrance of the temple. This practice is followed to suggest that the donor(s) stand(s) in reverence all the time before the deity and is aptly called *catācēvai* 'always praying'. Perhaps the carpenter of these doors has followed this practice to suggest that the donor is in *catācēvai* near the *tiṭṭivācal*. Similarly, the image of Viṣṇu is depicted near the wicket probably because He is the Protecting deity.

Themes depicted:

The themes depicted could be conveniently grouped as under:

1. Śaivite
2. Vaiṣṇavite
3. Śakti
4. Village deities
5. Saints and Heads of Mutts
6. Portrait sculptures
7. Erotic sculptures

Under Saivite group one finds Siva depicted in nine different forms, viz., (1) Sadāśiva (2) Bhikṣāṭana (3) Dakṣiṇāmūrti (4) Śiva-Pārvatī (5) Śiva/Pārvatī on Ṛṣabha (6) Liṅga (7) Vīrabhadra (8) Naṭarāja and (9) Horse dealer. Similarly under this group Gaṇapati is depicted in three different forms viz., (i) Viṇāyaka in sitting posture (ii) Vallabha-Gaṇapati (iii) Viṇāyaka sitting under Śiva-Pārvatī.

The third subgroup coming under Saivite category consists of Subrāhmaṇya images. He is depicted as (i) Āṛumugaṉ, (ii) Murukaṉ with Vaḷḷi and Devasena and (iii) as Sūrasaṁhāramūrti. Another panel depicts Saint Kaṇṇappar. Coming to the Vaiṣṇavite group one gets three subgroups viz., (i) Viṣṇu (ii) His *avatāras* and (iii) the scene of Gajendramokṣa. Viṣṇu is depicted (i) along with Bhūdevī alone or with Śrīdevī and Bhūdevī, (ii) as Anantaśāyi and (iii) as Garuḍārudha. As far as *avatāras* are concerned all the ten *avatāras* are depicted. Besides a panel depicts Lakshmi-Nrsimha. Among the *avatāras*, Kṛṣṇāvatara is dealt with in four panels suggesting its popularity. Kṛṣṇa is depicted as (i) appearing with Rukmini and Satyabhāma, (ii) sitting on the tree after taking away the clothes of *gopīs* (iii) Venugopāla and (iv) teasing a *gopī* by pulling her plaited hair. Besides these, one finds scenes from *Rāmāyaṇa* like (i) Daśarathā aiming at a boy who carries his blind parents, (ii) Hanumant meeting Rāma and Lakshmaṇa and (iii) the fight between Vāli and Sugrīva.

Under the category of Śakti one finds two panels. In one panel She is shown as Mahiṣāsuramardhnī and in another as Kāḷi. It is interesting to note that village deities like Ayyaṉār and Piṭāri are also portrayed in these panels. This shows the popularity of these deities among the donor and the people of that area. Another important feature in these panels is the depiction of what seems to be the images of Heads of Mutts. Both Śaivite and Vaiṣṇavite Heads are portrayed suggesting the eclectic approach of the donor.

The images of the donors are portrayed in strategic places as ardent devotees.

Among the erotic sculptures mention must be made about the depiction of Soranāyaka or Soranāyaki. The sculpture depicting a lady in the process of delivering a baby suggests the association of fertility cult.

In the light of the above observations one can arrive at the following conclusions. (1) The temple doors besides serving as a protecting device serve also as a medium of sculptural art. (2) The doors reflect the eclectic approach of the donor making no difference between deities belonging to the so called 'great' (*sic*) tradition and 'little' tradition. (3) The idea behind depicting the sculptures has close resemblance (i) of the *gopuram* plan (e.g. depiction of erotic sculptures) or (ii) the *maṇḍapa* plan (e.g. portrait sculptures standing in front of the shrine). (4) Probably it follows a pattern of viewing from left to right. (5) The sculptures denoting the Heads of Mutts suggest the popularity of Mutts and their importance.

Since this is the first attempt on the study of temple doors, the observations made are only tentative and a much more detailed study of all the existing temple doors is necessary to arrive at definite interpretations. It has to be pointed out here that an analysis has been attempted only on the basis of the content of the panels, and the techniques followed in making these sculptures and various ornamental designs have not been analysed. That will form a separate study.

REFERENCE

Balasubramaniam, S.R.(1975) *Middle Cōḷa Temples*. New Delhi.

Iconography of Gajasamharamurti

by

Raju Kalidos

Gajasamharamurti is a fierce form of Siva. It depicts the slaying of an elephant demon, gajsura, by Siva. It is one among the raudra (fierce) forms and forms part of Saiva iconography as related in the silpasastras, agamas and puranas. In the present paper an attempt is made to trace the canonic versions concerning this form. It also tries to identify an image of the type found in the National Museum at Calcutta with Gajasamharamurti which is (when the author saw it in November 1982) labelled as "Slayer of Andhaka, the demon-a fierce form of Siva." Though the main focus of attention is directed towards the sculpture in the Calcutta Museum, a comparative study of other images on the theme is also attempted.

According to the Kurma Purana[1] the destruction of gajasura who turned blasphemous by obstructing the Linga puja of certain brahmanas was accomplished by Siva. He tore the elephant and wore its hide as his garment.[2] The elephant demon is also said to have sprung from the sacrificial pit of the risis of Daruka forest who waged a cunning war with Siva which the latter tore and made its hide his upper garment.[3] According to the Varaha Purana[4] a mighty demon called Andhakasura challenged Siva and tried to whisk away his consort. In his audacious attempt he was helped by another demon called Nila who assumed the zoomorphic form of an elephant. Andhakasura was slayed by Siva with the help of Visnu and the Sapta- Matrkas while Nila was killed by Virabhdra. According to the Suprabhedagama also the slaying and flaying of the elephant demon was done under similar circumstances.[5] Thus mythological accounts treat of gajasura either as independent or as an aide of Andhakasura.

Silpasastras treat the independent form of gajasura as chastised by Siva. The Kasyapasilpasastra[6] calls it Gajasamharamurti. He is said to wear all kinds of ornaments and is either four or eight handed. In both types, he holds the elephant's skin in a tearing attitude with two hands on either side. Two other hands in the caturbhuja type bear the pasa (noose) and gajasrnga (tusk). The six other hands in the astabhuja type bear the sula (trident), udukkai (small drum) and pasa in right hands; gajasrnga, kapala (skull) and vismaya mudra in left hands. Siva is to stand on the mastaka (head) of the

slain elephant. The tail part of the dissected beast is carved above Siva's crown. On the sides legs are carved. The elephant's hide, thus shown in the background, should resemble a prabhamandala. The Amsumadbhedagama[7] describes two types of Gajasamharamurti which closely follow the caturbhuja and astabhuja murtis of Kasyapiya. In another astabhuja type the six hands, other than those holding the gajasarman (elephant's skin), according to the Kasyapiya, bear the following: sula, sword, gajasrnga, kapala, ketaka (shield) and sword. The left leg in all the three types is planted on the head of the elephant while the right leg is lifted sidewise in utkutika pose. Parvati with the baby, Kumara, stands by his side in a frightened attitude. The Silpartna calls the image Gajahamurti and describes two astabhuja types in both of which the objects held in hands are the same but for minor changes in mutual exchange of weapons from one hand to another. He wears the tiger skin and a white silk garment on the loins.[8] Other details are the same as related in Kasyapiya.

The Sritatvanidhi names the form under study as Gajasurasamharamurti (the Lord who destroyed the Elephant-demon). He has eight hands. Two of them tear the elephant and hold the skin above. Five of the hands hold the sula, sword, udukkai, tanka and mrga. The remaining hand is held in suci mudra. Other features of the image resemble the Kasyapiya version.[9]

The sculpture lodged in the Calcutta Museum (Pl.) is standing in a posture which resembles alidha or kuncita. The right leg is placed firmly on the ground while the left knee is raised upto the level of the genital organ. The latter is possibly in the urdhva posture. The foot of the raised leg is bent inwards and held by an attendant god as in the case of Bhuvarahamurti.[10] Few more attendant gods and goddesses are also found near the foot in dwarf stature. The slayer-god is eight handed. Two of the back hands are lifted above the head and hold the skin of the elephant under slaughter. Adjoining the lifted left hand, the mastaka of the elephant is carved. The front right hand holds a khadga (sword). The other two right hands are not clearly visible in the photograph. Perhaps one holds the noose. Of the left hands one is broken and the other not legible. One is bent at the joints and the forearm held in urdhvajanu posture holding a kapala(?). The facial expression of the slayer is so terrific with knitting eye-brows, eyes partially closed and the mouth slightly agape. The locks of hair are arranged in jatamakuta fashion. He wears a number of ornaments such as patra kundalas, haras, keyura, kankana, udarabandha and anklets. Also worn in upavita fashion is a kapalamala. The dress on the loins is a tiger skin, tugged to the body with a lion-faced belt.

The surest clue to the identification of the Calcutta Museum image with Gajasamharamurti is the mustaka of the elephant which is carved on the top left corner and the two upper hands which hold the gajacarman. Of the objects held in the hands, the pasa and the kapala are connected with the form under study. The khadga has replaced the trisula which is usually is associated in Gajasamharamurti. Other points of disagreement are: (1) the mastaka found at the top should have been placed at the bottom, (2) the elephant's hide is not arranged in the form of a prabhavali, (3) silpa texts do not provide the kapalamala to the present form, and (4) Instead of the attendant deities stationed near the foot, Siva's consort, Uma, with Skanda should be found there.

In spite of the discordant elements found in the iconographical constitution of the Calcutta Museum image, it can be identified with Gajasamharamurti with reference to the following points (1) the

khadga is a substitute for trisula and takes an important position in the Darasuram[11] and Halebid[12] images. (2) None of the available specimens of Gajasamharamurti depict the elephant's mastaka at the top of the panel. In this respect the Calcutta Museum image is unique, showing a deviation from the normal mode of portrayal. It seems to suggest that the Lord is still engaged in the act of dissecting the beast while other images of the type having the mastaka at the feet of the Lord, suggest the stage in which the slaying is complete. (3) Regarding the absence of prabhavali like hide of the elephant it may be stated that the sculpture at present is available in broken condition. So we cannot be sure whether the artist originally provided the prabhavali or not. (4) Though the silpa texts do not provide the kapalmala to Gajasamharamurti, it is an attitude of the fierce forms of Siva such as Bhairva. So artists could have taken the liberty of associating certain features, not actually prescribed in silpasastras, in order to bring out the terrific gesture effectively. In this respect it may be stated that the Valuvur bronze[13] has a kapala fitted on the jatamakuta of Gajasamharamurti which again is not advocated in canons of sculpture. (5) Regarding the absence of Uma and her baby near the foot of the Lord and the presence of other attendant deities, it may be observed that it need not be viewed seriously because in the Amrtapura[14] (Mysore Province) and Halebid[15] images a host of attendant deities other than Uma is present.

Regarding the other qualities of the image, it has to be noted that the utkutika posture as advocated in the Kasyapasilpasastra and executed in most of the available specimens is not to be clearly traceable in the image under study. The left leg is lifted in a pose, resembling the kuncita attitude or what may be called the ardha-caturatandava posture. This again need not be considered as a serious factor in disclaiming the image to be Gajasamharamurti. First of all, the present posture itself gets nearer to utkutika and is an apology for the same. Secondly, the Ellora (Cave XVI) image depicting Gajasamharamurti is in the same stance as the Calcutta Museum image with the only difference that the former has the right leg lifted.[16] Thirdly, the Pattadakkal image is in the same standing mould as the Calcutta Museum image.[17] This is to establish the idea that the utkutika posture if adopted in a slightly modified form need not be treated as a serious factor in the identification of a Gajasamharamurti image.

Taking up the question as to why a sculpture which goes so closely in identification with Gajasamharamurti is misconstrued as Andhakasuravadhamurti it may be stated that the image under study is remarkably in agreement with the Andhakasuravadhamurti of Cave XXIX at Ellora.[18] The stance, facial expression and ornamental aspects in both are in perfect harmony with each other. The Ellora sculpture also seems to have had a kapalamala which is damaged in the present state. On the similarity of the two images under consideration, the Calcutta Museum specimen could have been wrongly labelled.

To sum up, it may be stated that Andhakasuravadhamurti is not at all a canonical form of Saivite iconography. None of the South Indian silpa texts such as Kasyapasilpasastra, Agastyasakaladhikara, Silparatha, Sritatvanidhi, Sarasvatiyacitrakarmasastra and Manasara deal with a form called Andhakasuravadhamurti. The iconographical features of the said form are described by T.A.Gopinatha Rao (op. cit., Vol.II, Pt.I, pp. 192-4) and R.S.Gupte (op. cit., p. 70). Their accounts go closer to the description of Gajasamharamurti. There is no point of poighant deviation

from where both can be separated reasonably. T.A.Gopinatha Rao has taken into account the features of three images from Ellora and Elephanta for building up a form called Andhakasuravadhamurti which R.S.Gupte has followed in his monumental work with more illustrations. In their attempt both depend upon specimens and not silpasastras. Basically this error in the methodological approach to the study of Andhakasuravadamurti. In such a state of affairs the present author finds no need for a separate form called Andhakasuravadhamurti at all. That too in the case of Calcutta Museum sculpture which has the elephant's mastaka carved at the top of the panel, the label 'slayer of Andhaka' is not all fitting. Beyond doubt, it is Gajasamharamurti.

Foot Notes

1. T.A. Gopinatha Rao, Elements of Hindu Iconography (Varanasi, 1971), II, Pt. I, P. 150.
2. This incident is alluded to in a number of hymns, sung by the Nayanmars of the early 7th century A.D. in Tamil. Vide Tirumurai 4, Patikam 19, v. 7; Tirumurai 6, Patikam 237, v. 6. The references are: velatturi portton (He who wore the elephant's hide) and yanai uritton (He who tore the elephant).
3. Tirumandhiram, v. 21.
4. T.A.Gopinathat Rao, op. cit., I, Pt.II, pp. 379-80.
5. R.S.Gupte, Iconography of the Hindus, Buddhists and Jains (Bombay, 1972), p. 41.
6. Kasyapasilpasastra (herein-after noted as Kasyapiya) Patalam 73, vv. 4-15.
7. T.A.Gopinatha Rao, op. cit., II Pt.I, pp. 151-2.
8. Silparatha, ch.22, vv. 106-113.
9. Sritatvanidhi, I, 3.54.
10. Kalpana S. Desai, Iconography of Visnu (New Delhi, 1973), figs. 60-3.
11. T.A.Gopinatha Rao, op. cit., II, Pt.I, P. 154 Pl.xxxii.
12. Ibid., p. 156, Pl.xxxiii.
13. Ibid., p. 154, Pl.xxxi.
14. Ibid., pp. 152-3, Pl.xxx.
15. Ibid., p. 156, Pl.xxxiiii
16. Ibid., Pl.viii, fig.44.
17. R.S.Gupte, op. cit., Pl.viii, fig.43.
18. Ibid., Pl.ix, fig.54.

PAINTING IN TAMIL THEATRE

N.V. Ram Narsan

"Like the slender stem that
bears a huge jack-fruit,
too delicate is this lass,
with too great a love"

— *from Kuruntokai.*[1]

Tamil theatre is like a mural that has remained exposed to the weather for long. The colours have faded, the contours are lost and large areas have peeled off or been painted over. Still we may try and have an idea of its picturesque history through some painstaking study.

The earliest reference to 'theatre' in a Tamil work occurs in Kural, ascribed to the second century A.D. The term 'Kuuttaattu avaikkulaam'[2] meaning the 'audience at a playhouse' clearly implies the existence of theatre as an institution. Next, Cilappatikaaram, a work of the fifth century, provides us with a wealth of information on the stage. It gives detailed particulars of stage measurements, stage curtains and how they are fixed, art of illumination, prevailing theatre practices and a host of other technical details in regard to music and dance that point to a high level of accomplishment in the arts.

But theatre art was not confined to the limits of a constructed playhouse. Earliest cankam literature is replete with references to the place of Kuuttu, that is, both dance and dance-drama, in the lives of the Tamils. Song and dance would appear to have been a way of life with them, as natural as making love or going to war. Not only were there professional groups of entertainers depending on the King's bounty for making a living, but the people as a whole sang and danced, both men and women, king and warrior alike. They sang and danced at the countryside, at the battlefield, street junction, temple courtyard, community hall, almost anywhere. They sang and danced for invoking a blessing, honouring a hero or for just fun and laughter.

Cilappatikaaram makes mention of three stage curtains: one, oru muka elini fixed to the left stage pillar, a second, poru muka elini fixed to two right stage pillars and a third curtain, karantu varal elini, fixed at the top. It also mentions a painted canopy overhanging the stage, and pictures

of demi-gods placed on the stage for stage rites. But no curtain was used to divide the stage from the auditorium and hide it from view.

The three curtains may have been white or plain-coloured or embroidered like the covering of Matavi's veena. But none of the curtains was painted and used, establishing a locale or scene of action. The curtains were primarily used for effecting stage entrances of characters with dramatic impact. It is a credit to the theatrical sensibilities of the ancient Tamils that they had no use for the painted curtain and that they looked for other ways of employing the painter's vision in the theatre.

But spectacular, two-dimensional illusionistic scenes, painted in perspective, were the rage till the last quarter of the nineteenth century in Western theatres. It caught on in Indian theatres too at the turn of this century. Scene painters were hired in Tamil Nadu at fabulous salaries. The newly invented electric lamp came as an enormous, additional resource. With its help, scene-designers created fantastic, spectacular scenes— Indra Saba, Mount Kailas, Vaikuntam and the like. Changes from one gorgeous scene to another were made with breath-taking speed and efficiency. Stage work acquired the quality of magic and succeeded like magic.

The gathering force of the independence movement, the expanding social consciousness, spread of rationalist thought and scientific ideas did have an impact on the actor, the status of the art and theme content. The very puranic and mythological plays that were being produced were used as vehicles for projecting the new messages. Or the new genre of social plays came to be written. But basically the productions remained at the level of the illusionistic, picture—frame stage. This lasted well toward the mid-century.

Of Adolphe Appia it has been said, 'The history of stage-setting might almost be divided by B.A. (Before Appia) as history in general by B.C. (Before Christ)[3]

Appia held that theatrical productions must be based on the presence of the actor. Anything contrary to his presence must be eliminated. Three dimensional settings, rather than painted two dimensional settings, with an imaginative use of lighting, can alone provide a satisfactory answer. Stage pictures must be freed from the necessity of reproducing scenic backgrounds. Instead, they must be transformed until every element in them embodied the emotions that it was to arouse as an integral part of its form, its colour and its total design. The wind of change swept over the west and also the east.

The theatre in the early fifties in Tamil Nadu happened to attract a painter or two. The cyclorama and three dimensional settings were soon to become a general feature on the Tamil stage. Lighting was projected to suit the dramatic moods. Simultaneously there were experiments in new dramatic forms and themes and styles. The usually numerous scenes in a Tamil play gave place to the 'Act-play' with only a few sets, or even a single one.

In exceptional cases, attention was paid to stage movement, composition and choreography also. But sets still continued to be constructed mainly to establish locale and serve as a background.

After the fifties, the Sangeet Natak Akademi and Madras Natya Sangh

sponsored some theatre promotional activities. It was under one of these that Bharati's 'Kuyil Pattu' was produced in opera form, the entire stage picture of set, costumes, lighting and action blending as one, and providing a vehicle for the poetry and fantasy in the play. Another venture was an excercise in pure fancy that bore the imprint of the painter-director. It was a succession of visuals with absolutely no speech or song, but only some throat noises and drum beats. There was hardly any story but a theme line served well enough to develop the picturesque action sequence.

But discontent was brewing that Tamil theatre generally seemed to have lost direction and sense of purpose. Theatre had lapsed into escapist entertainment with little or no merit in either form or content. However worthwile experiments continued to be made. Bharati's Panchali Sabatham, for example, has been produced with at least four different approaches to set design, costuming and acting. But they were all flashes in the pan and it is not easy to assess them for lack of adequate documentation.

The awareness of the poor state of the Tamil theatre led to some vigorous counter-measures. The Regional Centre of the Lalit Kala Akademi at Madras has been the venue of some very interesting, experimental productions. It seemed to suggest that the painter-artist was making a strong entrance on the Tamil stage. Plays were produced on the open terrace of the Akademi, inside the exhibition hall and in the lawns.

Naturally, such diverse production conditions called for novel techniques in style and presentation, and acted as a spur to the imagination of the actor, director and the technical crew. The most significant end-point of this development today lies in a serious interest in terukkuuttu, the traditional theatre of Tamil Nadu. Invited audiences have been treated to specially arranged performances of terukkuuttu by the professional players, in an effort to understand the medium and its present relevance. Modern themes have been produced using the terukkuuttu style. Bharati's Panchali Sabatham also has been produced in terukkuttu style.

Terukkuttu is Tamil Nadu's oldest traditional theatre. Stage-decor is virtually non-existent in terukkuttu. But poets, painters and scholars are coming under its compelling spell. The visual element in terukkuttu is an inalienable part of its style and structure. It extends over every little of the striking out-of-the-world appearance of the characters, with their elaborate make-up, exotic costume, imposing head gear, and other outfit not to mention the altered pitch in their voice; song, gait, manner of entry, etc. Make-up details vary according to the characters. The rhythm of entry of characters varies with characters. The differences may not be immediately obvious to an uninstructed audience. But the difference will be sensed in the cumulative impact. The terukku uttu almost reminds one of the scenic goals of Adolphe Appia.

The high point of drama is reached when the visuals combine to become one with the play. Drama is hailed as drsya-kavya, i.e. a kavya with the visual attribute. But it should really be a fusion, and not just an admixture, of the elements of sight and sound and feeling. It is revealing that the theory of rasa or aesthetic emotion has been uniformly applied to all the three arts of painting, drama and poetry. Thus a dancer is required to be well- versed in the art of painting; and a painter is required to be

well-versed in the art of dancing. Great poets, of course, have always excelled in using the beauties of form, shape and colour as a means to evoke the aesthetic emotion.

Ancient Tamil dramatic texts have not survived. But Cilappatikaaram the most celebrated nataka kappiyam in Tamil is a mine. We may see a little of it.

The scene is the Cauvery bank.

> *On the river-bank sands, under the* shade of a punnai tree, on an ivory bed overhung by a canopy adorned with alluring pictures, Matavi is in the company of her Kovalan. Matavi salutes the yal of rare melodiousness with folded hands and uncovers the decorative wrap, the yal looking like a bashful young bride. She goes through the paces of the expert musician, now plucking a string, now caressing it, now giving a hard stroke and deftly passing her fingers from one string to another. Her jewelled fingers flitting on the strings look like a buzzing swarm of bees. Matavi hands the yal to Kovalan remarking, 'It is not for me to ask you to play', as if to suggest that she would like Kovalan to indicate the tal. Kovalan begins to play and Matavi is in raptures. But her beautiful world of fancy is rocked by Kovalan's first song.
>
> Hail to thee; Cauvery!
> When thy royal lord makes love to the Ganga, thou does not sulk, bless thee, beautiful Cauvery, Not to sulk even when your lord makes love to the Ganga is the greatness of virtuous wives, so I reckon, beautiful Cauvery!

Matavi wonders whether Kovalan is nursing a secret love in his heart. When Kovalan finishes his song and hands the yal to her, she is in a mood to tease him, and replies to him in song in the same strain.

But Kovalan would have none of it. He thinks, 'This deceitful girl is fancying some other lover'. He is piqued and saying, "The day has come to a close. Let us leave," he leaves without waiting for Matavi to join him.

> Matavi rises up slowly; the chatter of her maids galls on her ears; she orders them to stop and goes her way.

The foregoing is a whole compendium of stage directions, acting nuances and play of emotional modulations. It is a grand aural–visual-aesthetic whole.

Examples of the dramatic visual in Tamil literature can be multiplied. Sita, when Hanuman spots her in Asoka Vanam, looks like 'a painting soiled by smoke' [4] The king in Perunkatai takes a fancy to the queen's make-up maid. The king and the *maid exchange secret love messages by* painting them on the face of the unsuspecting queen who goes from one to the other [5] Civakan's queen catches him in the act of painting a picture of a beautiful girl whom he had saved from the clutches of an elephant and drama ensues [6]. Narada draws a picture of Valli and Murukan seeing it falls in love with the owner of the face. But Cankam literature deserves special mention [7] The use of painting in plot development in Uttara Rama Caritam and translations of other sanskrit plays in Tamil is not mentioned here.

Almost every poem in the akam tradition can be described as a 'play in miniature'. There is a given picturesque setting, a situation, a character in crisis and direct speech. However short, each poem evokes an aesthetic emotion, often conjuring

up exquisite visuals. Netunalvaatai is one of the longer poems. The opening scenes present the gruesomeness of the inclement weather in the forest region: 'The very mountain shakes in the chill'. The poet takes us through many graphic encounters enroute to the queen's chamber in the city. She is alone, the king is away at war and she feels forlorn. A maid approaches her and speaks the only dialogue in the whole poem of nearly 200 lines: "The king will come back, this very day". The inconsolable queen breaks into tears and looks longingly at the ceiling. She envies Rohini, the beloved of the moon, who is constantly by his side, as painted beautifully on the canopy overhanging her bed. The scene immediately changes to the battle-field where the king, at that midnight hour, having no time for thought of love or rest, is going on his nightly round, bringing cheer to his wounded men.

In passing, we must mention, however briefly, the dramas in paint, particularly on the temple walls and in the caves. As an example, we recall the bursting in of Lord Siva as an old man, into the wedding mandap, to prevent Sundarar from marrying and claim him as his own bonded slave. Sundarar's ascent to heaven and many other scenes are depicted in this composite painting. But the inclusion of a small but crowded kitchen scene, showing the hectic preparations for the wedding feast under way even when it is about to be stopped, is a masterpiece of dramatic invention.

In fine, the Tamils, valued painting as an ultimate in the beauty of form. To say that a maiden looked like a picture was to shower the highest form of praise on her. The same, if it is a building, a palace or any other. The Tamil's talent for drama is very evident from the ancient classics.

Now the two arts are perceptibly joining forces. Indian artistes and writers had been uprooted from tradition during the last two centuries and more. Like Tagore's traveller, they have been knocking at every alien door before coming to their own. It is timely to ask now: what lies ahead for art, artistes and society in today's context.

Gandhiji presided over a meeting of the writers and artistes at Madras in 1946. The gathering included poets, painters and play-wrights. By way of topical interest, it may be mentioned, that he was presented with a portrait of his own in oil. Gandhiji promptly put it to auction. Somebody bid one rupee. Gandhiji laughingly remarked, 'No, it is worth at least five hundreds'. Finally he gave it away for three hundred and fifty. During his address, Gandhiji wanted the writers and artistes to ask themselves, 'Why inspite of all our efforts Indian independence had not been achieved?'

Many would say that the question is as relevant today, in 1982, 35 years after achieving political independence, as it was in 1946.

Hopefully, painters would paint, and dramatists would dramatise that question most effectively, so as to bring a wide awareness of our social condition and social responsibilities.

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IDENTIFICATION OF RAGAS IN TIVYA PRABHANDAM

Mrs. Gnanā Kulendran

Introduction

Devotees of Lord Vishnu who advocated total surrender through bhakthi were known as Ālvārs. The divinely inspired soulful compositions of the twelve Alvars are known as Tivya Prabhandams. These songs which are known as Thiruppācurams are nearly four thousand in number. Tivya Prabhanda Pācurams were originally sung in the ancient mode of Tamil music known as Paṇ Icai. The earlier Paṇs are referred to as Rāgās now.

With the passage of time, due to various factors political, social and loss of patronage, the original way of singing the Tivya Prabhandam in Paṇ Icai has largely died down. At present they are either chanted, or sung in various Rāgās to suit the choice and inclination of the musicians.

An attempt is made here to trace the available original paṇs of the Prabhandams and as far as possible to bring out the equivalent rāgās for the relevant prabhandams with the help of Tēvāram paṇs.

Nalayira Tivya Prabhandam

The compositions of the Ālvārs are in a corpus entitled the Nālāyira Tivya Prabhandam (The sacred collection of four thousand Verses). Nātamuni, the earliest of the Ācāryas and disciple of Nammālvār is credited with the collection and codification of the prabhandams of the Ālvārs. Tradition confers upon Saint Nātamuṇi the honour of having done for Vaishnava Lyrics, what Nampiāṇṭār Nampi achieved for the Saiva Tēvārams.

Golden Age of Paṇ Icai

The Vaishnava Ālvārs and the Saiva Nāyanmārs are contemporaries and their cumulative contributions in the form of Prabhandams and Tēvārams respectively played the dominant role in the Bhakthi Movement for the revival of Hinduism during the

early Medieval period. Pan Icai was at its peak of acceptance and popularity. Therefore this age is justifiably referred to as the 'Golden Age of Pan Icai.'

Pans of Prabhandams

The four thousand prabhandams are sub-divided into four parts, each with nearly a thousand verses. The third thousand consists only of 'Iyatpās' (Prosody) meant only to be recited and not sung.

Publications of Nālāyira Tivya Prabhandam to date, have indicated the pans for the last thousand of the Prabhandams. This consists of Nammālvārs compositions known as Tiruvāimoli.

Pans of the second thousand of Prabhandams too (with the exception of a few) were only recently brought to light with the discovery of the relevant manuscripts of the Madurai Thamil Sangam.[1]

The pans of the first thousand songs are not known. Nevertheless there is internal evidence to show conclusively that they were sung.

> "Mālaipattum panninpam varap pātum" (Periyālvār 3.1.10)

> "Kōtai innicaiyar conna mālai" (Nācciyār Tirumoli 3.10)

These references unmistakably prove that the first thousand of Prabhandams were sung to melodious tunes, which undoubtedly is the Pan Icai of the early medieval period. The pans of these Prabhandams however remain to be identified.

The names of the pans of the prabhandams that have been discovered to date are as follows:

1. Pālaiyāl
2. Tōti
3. Takka rāgam
4. Purānirmai
5. Pañcamam
6. Nattapātai
7. Antāli
8. Kāntāram
9. Cerunti
10. Pañcuram
11. Palampañcuram
12. Mekarākakkuriñci
13. Kauvānam
14. Palamtakkarāgam
15. Mutirnta Kuruñci
16. Kuruñci
17. Nattarāgam
18. Viyālakkuruñci
19. Centurutti
20. Takkēci
21. Kolli
22. Intalam
23. Kaucikam
24. Piyantai
25. Cikāmaram
26. Kuranti
27. Viyantam
28. Nāttam

These 28 pans can be identified among the 103 pans of the ancient Tamils.[2]

Identification of Rāgās of Prabhandams with the help of Tēvāram pans

With the passage of time and due to external influence, the names of the paṇs have been changed to Rāgā names. Nevertheless the core had been preserved and can be easily discerned, by trained and knowledgeable musicians.

Luckily, paṇs of the Tevarams have been preserved to some extent by the traditional Othuvars and to be exact 23 paṇs out of the 103 pans are in vogue today. Some of these pans are not found in the Prabhandams. Likewise some of the pans mentioned in the Prabhandams are not found in the Tēvārams.

It is possible to identify that there are 20 paṇs that are common to both. This chart relates the paṇs of the Prabhandams and the Tēvārams, with their equivalent present day rāgās. The 20 common pans are indicated in asterisks.

Paṇs of Prabhandams 1	Paṇs of Tēvārams 2	The Equivalent Rāgās 3
Pālaiyāḻ	....	......
Tōṭi	......	....
....	Cevvaḻi	Yatukulakāmpoti
* Takkarāgam	Takkarāgam	Kāmpōti
* Puṟanīrmai	Puṟanīrmai	Pūpālam
* Pañcamam	Pañcamam	Āhiri
* Naṭṭapāṭai	Naṭṭapāṭai	Nāṭṭai
* Antāli	Antāḷikkuṟiñci	Cāmā
* Kāntāram	Kāntāram	Navaroс
Ceṟunti	....	....:
Pañcuram	....	......
* Palampañcuram	Palampañcuram	Cankarāparaṇam

1	2	3
Mekarākakkuriñci	Mekarākakkuriñci	Nīlāmpari
Kauvānam	Kollikkauvānam	Navarōs
Palamtakkarāgam	Palamtakkarāgam	Cuttacāvēri / Ārapi
Mutimtakuriñci	......	......
Kuriñci	Kuriñci	Harikāmpōti/Kuriñci
Nattarāgam	Nattarāgam	Pantuvarāli
Viyālakkuriñci	Viyālakkuriñci	Saurāstram
Centurutti	Centurutti	Matyamāvati
Takkēci	Takkēci	Kāmpōti
Kolli	Kolli	Navarōs
Intalam	Intalam	Māyāmālavakaula
...	Kāntārapañcamam	Kētārakaula
Kaucikam	Kaucikam	Pairavi
Piyantai	Piyantaikkāntāram	Navarōs
Cikāmaram	Cikāmaram	Nātanāmakkriyā
Kuranti	....	.....
Viyantam	.....	.....
Nāttam	.....	....
...	Cātāri	Pantuvarāli

Out of the 20 common pans 8 pans appear to have no clarity as to the specific rāgā in which they should be rendered. The Takkēci and Takkarāga pans are both sung in the rāgā Kāmpōti;

Kāntāram, Piyantaikkāntāram, Kolli and Kollikkauvānam - all these four pans are sung in the Rāgā Navarōs; Palamtakkarāga pan is sung either in Cuttacāveri or Ārapi rāga; and the Kurinci paṉ is sung either in HariKampōti or Kurinci rāgā.

Anyhow it is practically possible to pick out the Prabhandams that are said to be composed in these above 20 pans and set the music in accordance with the parallel Tēvarapannicai keeping in mind the depth of meaning and feeling of the Prabhandams.

Another Paṉ with its Rā...

According to Guruparamparai and Divyasuricaritam, Gnana campantar and Tirumankai Ālvār had met each other and Campantar had greatly appreciated the hymns sung by the Ālvār in Cīrkali. It is also well-known that the Nāyanmārs, Campantar and Appar were not only contemporaries but also close friends. They had also composed Tēvārams together. It can therefore be said that Campantar, Appar and Tirumankai Ālvār were contemporary Saint Singers and would have likely influenced one another in their compositions.

Appar by general acceptance was described as 'Tāṇṭaka Vēntar' i.e. king of Tāṇṭakams. It is a striking and fascinating feature that Appar and Tirumankai Ālvār are the only two, who have sung Tirutaṇṭakams in this period. Tirutantakams of Appar are traditionally sung in Harikāmpoti Rāga, which is equivalent to the Cempālaippaṉ of the ancient Tamil Paṉ Icai. 'It is therefore very likely that Tirumankai Ālvars Tiruneṭuntaṇṭakams would have also been sung in Cempālaippaṉ.

It is suggested that the Tiruneṭuntāntakams of Tirumankai Ālvār could be sung in the rāgā Harikāmpoti.

Suggested Tālās for the Prabhandams

Like the Kaṭṭalais (கட்டளை) for the Tēvārams, there is ottu (ஒத்து) mentioned for the Prabhandams which is intended to indicate the rhythm of tālā of the song. Swami Vipulānantā in his Yāl Nūl has elucidated to a great extent the Kaṭṭalais of the Tēvārams. But no work appears to have been done to elucidate the 'ottu' of the Prabhandams. Enlightenment by research in this aspect can definitely enrich the Paṉ Icai of the Prabhandams.

Tēvārams are now generally sung to Āti, Thisra Thiruputai and Rūpaka tālās and has found general acceptance. This practise may be followed for the Prabhandams also, the choice of Tāla to be in consonance with the rhythmic pattern of the composition.

Conclusion

The foregoing discussion and analysis clearly shows that Rāgās of the Tēvārams are appropriate for the rendering of the Prabhandams in accordance with the Pan Icai as conceived by the Ālvārs.' It should be emphasised here that further research must be made to elucidate in greater detail the original music of the Prabhandams. This will help to enhance the antiquity and the greatness of the music of the Tamils.

The Pan Icai of the Alvārs not only influenced poet and saint Singers like Arunāchala Kavirāyar and Thiyagaraja Swamigal of Tamil Nadu, but provided inspiration for the musical compositions of Sri Jayadeva, Purantaratas, Tallappakkam Annamacarya, Tukkaram and Batrācala Rāmatās of the neighbouring areas.

It will be an enduring service to Indian music in general and in particular to devotional music, if research is undertaken to study in depth the impact of Pan Icai of the Ālvārs, on the works of the above mentioned saint singers.

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THE PRESENT PHASE

A.S.Raman

ART is like handwriting. It reveals the character of an individual or a nation. When an Indian artist imitates the style of another belonging to a different ethos, however competently, he can only end up as a forgerer. He says nothing worthwhile through his work which only reflects the character, temperament and personality of the artist he admires. It is therefore imperative that an artist should express himself through his own language, however inadequate or obsolete it may be. Fashion is no substitute for faith and it is only from faith that genuinely creative art emerges. As Oscar Wilde has said, fashion is so ugly that one is happy to see it change fast, However when a serious and responsible artist finds the visual language of another country suitable to his taste, temperament and technique and adapts it, he is not imitative. For basically he expresses the ethos of his own country rather than that of another. He cannot escape from it. Thus there is more of Spain than of Africa in a Picasso version of an African mask or statue, more of France than of India in a Matisse interpretation of a Kangra miniature and more of India than of France in a Gauguinesque composition by Amrita Sher-Gil.

In the south, particularly in TamilNadu the emphasis happily is still not on imitation or adaptation, but on creative conformity strengthened and sustained by values which are perennially relevant. The present generation of Tamil artists are understandably keen on expressing themselves in the modern idiom. But they are also aware that no modern idiom is relevant or durable unless it is integrated into tradition. That is why one finds a rationalebehind the avant-garde in Tamil Nadu where there is a healthy resistance to wild adventurism. Here the damage that militant, Western-style modernism causes is minimal. There is no full stop in art. No finality. It is essentially a tentative but continuous process constantly renewing itself. Even such a fiercely committed highpriest of modern art as Clement Greenberg says: 'Art is, among many other things, continuity. Without the past of art, and without the need and compulsion to maintain past standards of excellence, such a thing as modern art would be impossible'.

At the turn of the present century there was no such thing as Indian art. The west was very much with us partly directly via inferior

British artists and partly indirectly via Ravi Varma whose creations were more western than Indian though he managed to dress them up deceptively in Indian costumes. A strong reaction seemed inevitable and soon it came in the form of a spirited revivalist movement with its base in Calcutta paradoxically under the leadership of an Englishman, EB Havell who was ably assisted by Abanindranath Tagore and others. They made a fervent plea for the Indian artist's return to the traditional Indian norms and forms, totally rejecting the alien Royal Academy style classicism. Soon the movement spread throughout the country and acquired the thrust of a national upsurge. In fact the revivalist agitation was the cultural counterpart of the freedom struggle. Almost all Indian artists irrespective of their backgrounds rallied round Havell and Abanindranath Tagore and began to explore the possiblities of popularising the methods and techniques used by the masters who painted the Ajanta frescoes and Moghul and Rajput miniatures. Artists trained by Abanindranath Tagore and Nandalal Bose began to teach students in different parts of the country thus preparing the ground for the emergence of the Bengal School which for many decades remained not only a symbol of national identity but a synonym for modern art Indian style. For a long time art taught or practised outside the Bengal School was considered irrelevant to the Indian situation and sensibility. The Bengal School of course had its exponents in the south also. At Machilipatnam in Andhra, Promotesh Chaudhury was the mentor of a number of students of the National College who tried to paint in Ajanta style. At Bangalore Venkatappa represented the Bengal School and at Trivandrum, Madhava Menon.

There is little evidence to suggest that the Bengal School type of revivalism, which tried to return to the mere externals of traditional art rather than to the spirit behind it, had any impact on the artists of TamilNadu, though Devi prasad Roy Chowdhuri, the first Indian principal of the Government School (now College) of Arts and Crafts in Madras, drew his early inspiration from his teacher, Abanindranath Tagore, and other stalwarts of the revivalist movement. In fact Chowdhuri broke away from the Bengal School in his search for a personal idiom. He was too independent and innovative to observe the rules of the game within the orbit of the Bengal School which he found too soft and suave for his temperament. He had no interest in the Bengal School because he had no interest in shortcuts to the Indian style. As the head of South India's leading and India's oldest art school for nearly three decades he was a major influence on the art scene in Madras. The institution over which he presided has, over the years, acquired immense prestige because of his association with it. As a teacher, he laid equal stress on freedom and discipline, freedom to experiment and explore, to innovate and investigate, and discipline in order to be able to work within the accepted format of universally valid norms and standards. He firmly believed that modern art was a severe discipline. It is this discipline that separates the art of children and chimpanzees from paintings by Klee and Kandinsky. Under Chowdhuri's charismatic impact, his students learnt where to stop in their pursuit of new forms and idioms, without going back to the tired mannerisms of the East or the West. They now knew how to relate the modern idiom to their personal vision and technique without alienating themselves from their own

heritage. So to Chowdhuri goes the credit for the discipline and decorum with which the artists of TamilNadu express themselves in the modern idiom. In their works there is a sensuous and self-sustaining rhythm and harmony. If even today Madras remains sane and serene under the impact of the avalanche of styles and techniques from Europe and America, the reason is the healthy influence of the College of Arts and Crafts which has well-tested traditions to preserve.

After Chowdhuri's retirement in 1957, his student, KCS Paniker, became the principal. Earlier he had worked as Vice-Principal for two years. For 10 years he made his presence felt on the contemporary art scene in a big way. He was personally responsible for the birth of Cholamandal, a unique experiment in a Utopia that works, an exclusive artists settlement based on the principles of liberty, equality and fratenity. It is half way between Madras and Mamallapuram. Paniker encouraged his students to rediscover traditional forms and symbols, not for imitation or adaptation, but for reinterpretation in the virile contemporary idiom. Tantric signs and symbols became the new vocabulary for artists who accepted his leadership. They were able to impart a new flavour and accent to their work which was now Indian without being derivative and modern without being contrived or irrelevant. There was a breath of fresh air, thanks to the efforts of Paniker who was committed to the genuine revival of the Indian vocabulary and imagery.

The most dominant influences on the art of the Tamils, particularly in the post-independance years, thus were non-Tamils: Chowdhuri and Paniker.

The artists who are now active today in TamilNadu have drawn their inspiration directly or indirectly either from Chowdhuri or from Paniker. It would be invidious to single out some for special mention and leave out the rest. There are so many good artists today and it would be difficult to name them. What they have in common is a combination of factors without which creative art within the four walls of tradition is not possible. For example, their strength lies in their sound technique for which the Madras College of Arts and Crafts is deservedly famous. They have a mastery over the grammar of painting and this explains the structural firmness of their compositions which have no loose ends. Their drawing is forceful and fluent and their palette is warm and sensuous. Abstraction interests them but only to a limited extent. More as an exercise in colours and forms than as an end in itself. Their motifs come from temples, festivals, rituals and folk arts and crafts which give one an insight into the cultural milieu in TamilNadu. The general tone and temper of their compositions are soothing because the artists are free from the sort of tensions that highly subjective and self-conscious modernists have to endure. If you want to see modern art that is Indian and intelligible, you should go to Madras.

The artists of South India in general and of TamilNadu in particular are not happy for want of recognition commensurate with the quality of their work. They have a feeling of denial of their legitimate share in the national cake. It is complained that the Lalit Kala Akademi does not seem to give them a fair deal. Paniker always championed the cause of the Tamil artists, even at the risk of being misunderstood as overplaying his Big Brother's role, with the result that there was little improvement in the situation.

The Tamil and other South Indian artists have yet to make an impact on the All-India scene for no fault of theirs. For example, in the whole of South India, there are only two Fellows of the Lalit Kala Akademi while just one city, Bombay, has seven and Delhi more. As for the art purchases for the National Gallery of Modern Art in New Delhi and other institutions and monographs on individual artists being brought out by the Lalit Kala Akademi the Tamil artists are under- represented. One cannot blame anybody. The system is such. Decisions are taken on the basis of the majority vote. So four states against the rest of India are bound to remain bypassed, unless they make a big noise.

The TamilNadu Government's generous offer of one acre of land as free gift and contribution of 50% towards the cost of construction facilitated the establishment of the Regional Centre of the Lalit Kala Akademi in Madras in 1978 and it was a very happy event. In six years it has developed into a most effective forum for artists of South India who have begun to identify themselves with it totally. With their continued good will and cooperation the Centre can be expected to have smooth sailing and complete the tasks assigned to it well ahead of schedule. It has so far organised a number of workshops, exhibitions, lecture demonstrations, seminars and conferences which have gone a long way towards bringing the artists and the public closer together. The Centre with its resources and infrastructure is best equipped to offer whatever advice and assistance the artists need. As a Regional Centre, controlled by the Central Akademi in Delhi it has no doubt its limitations. But the policy to decentralise the work of the parent body implies sufficient autonomy for regional centres which are expected to play a big role in stimulating art activities at state level.

Earlier --in 1975 -- the Government of TamilNadu set up a State Akademi called TamilNadu Oviam Nunkalai Kuzhu with a view to giving an impetus to art activities through exhibitions, publications, seminars, conferences, artist camps, purchases of paintings, sculptures, etc., inter-state and inter-district cultural exchanges, fellowships to eminent artists, subsidies to one man shows, orientation courses to art teachers and so on. The Kuzhu also sponsors exhibitions by foreign artists who visit TamilNadu under the cultural exchange programme of the Government of India. The Kuzhu and the Regional Centre sometimes organise programmes jointly.

In the city of Madras there are several artist groups actively engaged in the implementation of their own programmes. Cholamandal has one of the better organised groups. It is known as Artists' Handicrafts Association. Cholamandal is on the tourist map of Madras. Naturally the artists here have steady custom. They have a permanent art gallery and an open air theatre. They organise a seven day cultural festival each year to stimulate inter-disciplinary integration.

The Progressive Painters' Association, started by Paniker. has its office at Cholamandal. It organises (1) group shows of members outside Madras such as Bombay, Delhi, Bangalore and other cities, (2) annual art shows for members and (3) exhibitions of national importance such as the one entitled 'Contemporary Paintings in Miniature Format'. It acquires works of art by members for its permanent collection. It publishes an art journal, ARTRENDS. It sets

up snack bars and arranges for group discussions and lectures. It screens films on art. It maintains a good library.

The South Indian Society of Painters is another important organization engaged in more or less the same type of activities as the Progressive Painters' Association.

The Madras Art Club, established in 1958, comprises Sunday painters, that is, painters who are non professionals drawn from different walks of life. It conducts regular evening classes on art on....Wednesdays and Fridays with the assistance of professors from the College of Arts and Crafts. It meets on Sundays too. Demonstrations by well-known painters are held at regular intervals. On the spot sketching is encouraged during outdoor painting excursions. It organises film shows for its members and their guests in collaboration with Alliance Francaise and Max Muller Bhavan. Though amateurs, its members have succesfully competed with professionals and won many awards at prestigious All-India exhibitions.

At Pallavaram a group of 50 artists have formed 'The Association of Young Painters and Sculptors' which regularly puts up annual and other shows in Tamilnadu and outside. It sponsors candidates for specialised training in print-making at Garhi work-shops in Delhi, managed by the Lalit Kala Akademi.

Loyola Art Club is meant for the art students of the Loyola college. They meet on Friday evenings, to sketch or do clay-modelling under the guidance of a trained artist. Well-known artists are often invited to hold lecture demonstrations. One of the Club's most imaginative programmes concerns school children who enter a competition each year for on the spot painting. The prize-winning as well as other entries are exhibited at the college and the press and the public are persuaded to take a look at them.

At the district level also there are many active art organisations. At Tiruchirapalli, for example, there are two (1)Contemporary Art Centre and (2) United Painters' Association. At Vellore also there are two : (1) North Arcot Artists' Association and (2) North Arcot District Art Centre. Madurai has its Madurai Artists' Group, Kanchipuram its Tamilnadu Arts and Crafts Improvement Association and Coimbatore its Chitrakala Academy. They all have identical programmes designed (1) to encourage the teaching, practice and appreciation of art, (2) to secure for art and artists maximum exposure and (3) to help the State and Central Akademies in the implementation of general programmes. All these organisations are well patronised by their members who have evidently a sense of commitment to excellence in art.

Unfortunately there are no commercial galleries worth the name inTamilNadu. The result is that the practising artists have to depend on art dealers outside the State for the sponsorship of their shows. There is only one commercial gallery in Madras ...Sarala Art Centre which does not seem to have the resources for promoting artists with professional thoroughness. The Kalayatra, another commercial enterprise, is organisationally sound and artistically progressive. But since it is a mobile exhibition comprising works by specially invited artists, it can be of little use to young, unknown and highly talented artists. At present the main sources of art patronage are government or semi-government organisations such as museums, galleries, Akademies and public sector

undertakings. To a small extent foreigners, i.e., diplomats, tourists and business men also buy contemporary Indian paintings, sculptures and graphics.

What are the facilities in TamilNadu for training in art? The State has two first - rate government run art colleges in Madras and Kumbakonam. In addition there are two very good institutions which deserve special mention; (1) Kalakshetra, at Thiruvanmiyur and (2) the Tamilnadu College Architecture and Sculpture at Mamallapuram. Kalakshetra is popularly known only for its faculties of music and dance. It has also a very good department of painting under the stewardship of one of the seniormost painters in the country, K.Sreenivasulu. It offers a 4 year diploma course. At Kalakshetra the students are trained only in traditional methods and techniques. There is no Western - style modelling or on the spot sketching. Revival of lost or neglected forms and designs is the primary objective here.

At Mamallapuram also it is the same approach. It is a unique institution in the sense that it imparts training exclusively in different branches of temple arts and crafts. It offers a 4 year diploma course and there is a wide range of subjects to choose from: (1) Temple Architecture, (2) Stone Sculpture, (3)Sudhai Sculpture, (4) Metal Sculpture, (5) Wood Sculpture and (6) Traditional Painting. Affiliated to the University of Madras, it also offers a 3 year degree course in Temple Architecture. A well-known authority on the temple arts, V.Ganapathi Sthapathi, is the head of the institution. There is no problem of placement for the sculptors and architects who pass out of the Mamallapuram Institute because demand is more than supply. Their services are required not only in different parts of the country but in other countries too, such as the USA, Malaysia, Singapore, SriLanka and Mauritius.

Many Tamil artists who work abroad or in other States within the country have distinguished themselves as competent exponents of modern art with a relevance to the Indian context. Viswanathan in Paris, R.Sarangan in Delhi and J.Swaminathan at Bhopal, among many others, have enriched their Indian sensibility by assimilating the modern idiom.



Jain temple (vardhamana) Detail paintings on ceiling in outer hall. Tiruparutikunram. District Chingleput.

PLANTS OF THE TAMIL CANKAM LITERATURE

C. Srinivasan

Introduction

The Tamil Cańkam Literature is composed of about 2382 verses and poems, grouped under 'Ten Idylls' and 'Eight Anthologies'. They are well known not only for their antiquity but also for original ideas and ideals. In this literature about 215 names of plants have been mentioned by hundreds of poets of lore. Actually these names refer to about 152 herbs, shrubs and trees only since a particular plant has been called by different names by different poets. They have mentioned mostly the flowers of these plants. The tenderness, softness, beauty, colour and smell of the flowers are noted in simile form while eulogizing maidens in love.

The Tolkāppiyam is not only a comprehensive grammar of the Tamil language but also a grammar of life of the people. It divides the land into four regions such as:

1. Kuṟiñci (the hills and the hilly regions),
2. Mullai (the forests and the forest regions),
3. Marutam (the agricultural fields and the field regions),
4. Neital (the sea and littoral regions).

There is also another division of the land called Pālai (dry scrub jungles and hilly tracts) which is but a mixture of Kuṟiñci and Mullai. The plants, animals and the human beings found in all these natural ecological regions have been specified with details. However the plants specified for a particular region need not be its exclusive belonging. It may appear in other regions also. Kapilar in his Kuṟiñcippāṭṭu notes that a maiden with her companion collects the flowers of about 100 plants to make garlands. These plants do not belong to Kuṟiñci region alone but occur in other divisions also.

Identification

There are a few writers who have enlisted and described these 'Cańkam plants as narrated by the poets. It is a pity that they have blindly copied one another or have depended or hearsay information. None of them are botanists and so their views lack authenticity.

It is true that most of the names of these Cańkam plants have become obsolete and the present day names

of some of them mutilated. Commentators of the classical literature give one name for the other. As there are different names by different poets for a particular plant, the identification of these plants have become all the more difficult in the absence of any description of the plants. In order to ascertain their correct identity, these rare plants had to be collected wherever available and examined botanically with the aid of a stereo microscope. Their literary names and the names given by the commentators had to be carefully compared with their local colloquial names if they had not become extinct in order to find out their binomials.

It is heartening to note that Lushington (1915) has passed on to posterity a tremendous treasure of vernacular lists of names (Tamil, Malayalam, Telugu and Tulu) of these ancient plants with their botanical equivalents. In the same way Gamble (1912) has also given a list of vernacular names of some of the plants. Informations have been gathered from the Kualalumpur Botanic garden, Malaysia; Paradenia Botanic Garden, Sri Lanka, where the Tamil names of these plants have been written with their binomials.

The scholarly Commentator of Caṅkam Literature, Naccinārkkiniyar, has given their correct names and so we have followed him. Some poets have given a full description of three or four plants and poets like Kīrattaṉār and Iḷantiraiyaṉār have thrown light in describing the leaf of *Nymphaea violacea* Roxb. and the fruit of *Wrightia tinctoria*, for *Neital* and *Pālai* respectively. But for their clever description in using appropriate similes, it would have been impossible to arrive at the correct identity of these plants as there has been a Himalayan Confusion in determining their names not only amongst the commentators but also the present day book writers. Even now we could not determine the correct binomials of about six or seven plants. It is likely that these plants have either become extinct or their ancient names have become obsolete.

Description

The poets have pointed out in most cases the delicate nature of the flowers of a number of plants especially in comparing their tenderness, fragrance and colour with the lady-love or the different parts of her body. The lady-love and the companion used to pluck the flowers to make wreaths to adorn themselves. The season or time of flowering, their majestic appearance, the way in which the different insects go humming about the opening buds in order to suck honey, the arrangements of the flowers in the inflorescence, the nature of the fruits and seeds have been described. The poets while referring to the flowers and plants in Tamil Nadu have brought out the cultural value, aesthetic sense, economic importance of food yielding, timber yielding and fibre yielding plants. Mention of the condiments like pepper, luxury plants like sandal wood, cosmetic plants like turmeric, medicinal plants like ginger, myrabolam *(Terminalia chibula)*, fruit-yielding plants like banana, mango and jack has been made as being grown or cultivated.

Classification

In classifying these Caṅkam plants, we have followed the system of taxonomy of Bentham and Hooker.

Although 215 names of herbs, shrubs and trees have been found in the Cankam Literature, they actually refer to 152 plants only. They belong to 117 genera of 48+7 dicot families and 9 monocot families. Arranging these plants in this system of classification, their taxonomical description has been written in accordance with the principles of Hooker and Gamble. For each and every plant, therefore, a number of details have been given as in the following example:

1. Tamil name of the plant	Kāntaḷ
2. Botanical name	*Gloriosa superba*, Lin.
3. Division in the plant kingdom	Angiosperm; Monocotyledenous
4. Series	Coronareae
5. Family name	Liliaceae
6. Generic name	*Gloriosa*
7. Specific name	*superba*, Linn
8. Caṅkam name	Kāntaḷ
9. Other caṅkam names	Tondri, Kodal
10. Later day name	Kalappai kiḻaṅgu
11. Present day (local) name	Kārttikai Pūñceṭi
12. English name	Glory Lily
13. Botanical nature and ecology	Herb, tendril, climber, 20 ft. long, grows upto 2000 ft. elevation.
14. Details of	
1. root	Root-stock and small roots
2. Stem of the plant	Herbaceous, slender, greenish
3. Leaf	Ovate, tip modified into tendril
4. Inflorescence	Solitary
5. Flower	Pedicells reflexed - handsome beautiful, red coloured flower, base of the lobes white in colour.

6. Details of the flower	
(a) Calyx	Perianth segments 6 free
(b) Corolla	margin undulate
(c) Androecium	16 stamens; filaments - filiform, versatile anther
(d) Gynaecium	3 celled-ovary; many ovules
(e) pollination	Entomophilous
7. Fruit	Coriaceons; septicidal capsule
8. Seed	Subglobose
9. Details in the seed	
(a) Testa-spongy	
(b) Cotyledon or endosperm	
(c) Embryo - cylindric	
15. Chromosome number of the plant	2n = 22 - Miller (1930), Janaki Ammal (D.1945)
16. Economic value	Root stock poisonous
17. Medicinal property (if any)	Contains Colchicine-a poison

18. Any type of modern research work done so far in the plant

At the Botany Laboratory of the Annamalai University (1954) the poisonous chemical colchicine was extracted from the root stock of this plant and it was used to induce deduplication of the chromosomes in *Seasamum* and *Phaseolus* plants.

The flower resembles the palm of maidens when the finger tips are stained red by Lawsonia leaf paste.

The Presentation of the Poets

About 130 ancient poets have passed on to posterity a fragmentary but correct information about the 152 plants. Mention must be made about Kapilar who has enlisted about 100 names of flowering plants in Kuriñcippāṭṭu. For example when naming Koṉrai (Indian laburnum) *Cassia fistula,* Linn) he has described the characteristic and peculiar hanging nature of its inflorescence. As the

growing apical bud is directed downwards in the long hanging inflorescence, the old flowers will be found at the top and the young buds downwards. We in the Annamalai University during (1952) thought fit to critically examine the actual growing habit of this racemose type of inflorescence whether it is abnormal, whether the apical growing bud is geophillous (loving gravitational pull) in this small tree. When these trees were in full bloom, we selected three trees of the Botanic gardens and four inflorescences in each tree. Their growing tips were lifted up and tied carefully without causing any injury. After two three days all the growing tips of all the inflorescences turned back and began to grow downwards. After a few days of growth the growing tips of all the experimental inflorescences were again lifted upwards and tied softly. All the growing tips minute young buds again turned back and grew downwards. In some of the long inflorescences the experiment was repeated for the third time. Again it was found that the growing buds exhibited their peculiar feature of growing downwards. Therefore it has been established that the ancient poet had very closely observed and explained the peculiar growing habit of the inflorescence of this tree. A close study of the description by the poets induces us to classify in their own perspective and examine their botanical information just to find out how far their knowledge is falling in line with the modern Botanical thought, how far it is different and how far it has excelled the present day observations of the Botanists.

Though modern Botanical classification has been followed in the project we may group the flowers here in accordance with the poetic thought.

I - A. Flowers of the Five Different Division of the Land

These are also known as the flowers of akattiṇai. They are indicative of the natural habit and life of the people in each land type.

No. Name	Binomials	Characteristic life feature
1. Kuriñci	*Phelophyllum kunthianum* Nees	Dealing with love at first sight.
2. Mullai	*Jasminum auriculatum*, Vah.	Dealing with the prudent life of the lady-love during separation.
3. Neital	*Nympheae violacea*, Roxb	The parted one awaits with all prudence and pained heart for the return of the lover.
4. Marutam	*Terminalia arjuna*, W.A.	Petty quarrels of housewife with her husband for illegal relations with prostitutes.
5. Pālai	*Wrightia tinctoria* R.Brid.	Elopment, kidnapping and sufferings during separation.

I - B. Flowers Used During Warfare

The following are called the flowers of puṟattinai as they are indicative of the feelings of the warriors.

No.	Name	Binomials	Characteristic stages and feature of strategy
1.	Vetci	*Ixora coccinia*	This flower is adorned by warriors indicaitng the declaration of war by forcibly taking possession of the herds of cattle of the enemy.
2.	Karantai	*Spharanthes Indicus*, L.	This flower adorns warriors on the march to recover the captured cattle.
3.	Vañci	*Salix tetrasperma* Roxb.	Resisting the enemy's moves.
4.	Kāñci	*Trewia nodiflora*, L.	Counter-attack
5.	Uḻiñai	*Cardiospermum, helicacabum*, L.	Siege of fort
6.	Nocci	*Vitex negundo*, L.	Attacking the army of the enemy to blast them out.
7.	Tumpai	*Leucas aspera*, Sprang.	Regular warfare by the two opposite forces.
8.	Vākai	*Albizzia lebbec*, Benth.	The victory

II. Flowers as Insignia of the Three Great Dynasty of the Monarchs of the Tamil Land

No.	Name of the Kingdom	Name of the flower	Binomials
1.	Cōḻa Kings	Aar	*Bauhinia recemosa*, Lam.
2.	Pāṇḍyā Kings	Vēmpu	*Azardirachta indica*, A. Juss.
3.	Cērā Kings	Paṉai (leaf)	*Borassus flabellifer*, L.

III. Jasminum - The Flower of Chastity

Jasmines were associated with all the phases of the life of the ancient Tamils. Botanically there are twelve species mentioned in Caṅkam literature. The typical one is *Jasminum auriculatum*,. Vahl. A climbing twiner shrub called Mullai in Tamil, it has fragrant white flowers, often referred to in hundreds of poems. The twelve species are:

1. Aṭukku-Mallikai	*Jasminum arborosescens*, Roxb.
2. Atiral	*Jasminum angustifolium*, Vahl.
3. Ūci mullai	*Jasminum cuspidatum*, Rott.
4. Kuḷavi	*Jasminum griffithii*, Clarke.
5. Kokuṭi	*Jasminum sambac*, Ait.
6. Cemmal	*Jasminum officinale*, Linn.
7. Talavan	*Jasminum grandiflorum*, Lin.
8. Mayilai	*Jasminum sambac*, Var. florae - monoraepleno.
9. Mullai	*Jasminum auriculatum*, Vahl.
10. Mallikai	*Jasminum pubescens*, Willd.
11. Mauval	*Jasminum sessiflorum*, Vahl.
12. Cetal	*Nyctanthes arbo-tristis*, Linn.

The poets have used this Mullai flowering plant in the various walks of life both in Akam (inner) and Puram (outside) life. It has been stated that the flower of *Jasminum auriculatum* is the symbol of chastity (Kaṟpu-Mullai) for women both before and after marriage. It is worth narrating a dramatic incident as depicted in Kalittokai (115). There is a conversation between a maiden in love and her companion.

"Oh my dear friend! A charming youth of our clan offered me yesterday a wreath of Mullai flowers which he wore as garland. I was so pleased to receive it from him that I got it inserted into my tuft. Just like the intoxicating toddy which when secretly drunk, exposes one after a little while, my secret love was exposed and I was caught red-handed. You know when my mother nurse tried to comb my hair with incense in front of my seated parents, that wreath fell down. She suddenly quivered her hands as if she touched fire and went aside without even questioning me in anguish how that wreath came about nor taking me to task in anger. My mother felt shy and was worried. I at once tied in flurry my lock of scented hair and rose up holding my blue embroidered cloth lying beside and ran out to

hide myself in the bush nearly. My dear, You have come here. What is to be done? I tremble!"

Her girl-friend consoled her telling, "Dear friend! Don't worry. Since you have accepted his wreath and used it on your tresses our kith and kin discussed the matter with your parents last night and have decided to marry you to him. Look yonder! The arrangements for your marriage are in progress".

Therefore it was the custom of the Tamils to solumnize the marriage if only the maiden accepts the jasmine flowers offered by handsome love-lorn youth in those days. It simply illustrates the significance and importance they had for Mullai.

Outside the domestic circles activities of the outside world known as Puram have also been entwined with *Jasminum auriculatum*. There are about 12 such kinds of Mullai.

1. Mullai of the king	To speak about the victory of the king.
2. Mullai of the Parpanan	To speak of glory of steadfastness of Parpanan.
3. Mullai of the juries	To speak of the justice in the court of juries.
4. Mullai of the astrologer	To speak of glory of the astrologer.
5. Mullai of the ancient chivalrous women	To speak of the strong conviction of the chivalrous women.
6. Mullai of the family of mighty men of war	To speak of the greatness of the family of the mighty warriors.
7. Mullai of the individual warrior	To speak about the glory of the tradition, courage and strength of the individual warrior.
8. Mullai of the guards of the king	To speak of the greatness and alertness of the home-guards of the King.
9. Mullai of the militant soldier	To speak of the uncontrollable bravery and militant mood of the soldier.
10. Mullai of the bravery of the king	To speak of the strength and bravery of the king in the battle-field.

11. Mullai of the majestic umbrella of the king	To speak of the majesty of the victorious umbrella of the king.
12. Mullai of the men of Wisdom	To speak of the rare qualities of the great men of wisdom.

All those show the importance attached to Mullai and how it was interlocked with the life of the people in those days. Apart from the kings there were seven outstanding lords and philonthropists of lore, called Kaḍaiēḻuvaḷḷal. One of them is the noted Pāri a chieftan of the hilly land of Parambu. He was well known for his philanthropy and poets used to abound him with poems for gifts. The great poet of eminence, Kapilar was not only his devoted friend but the poet-laureate of his country. One day when Pāri was riding back to his palace in his chariot, he noticed a tender Mullai twiner oscillating on the hilly tract for want of a hold to climb on and it appeared that the plant was tossing to embrace his chariot. The kind-hearted Pāri felt so generous to leave his chariot there itself for the Mullai plant to grow upon it though it has not sung his praise and walked the distance to his palace. This merciful generosity in offering his royal chariot just for a mere plant has been prasied by the poets (Puṟanāṉūṟu: 200, 201; Ciṟupāṇāṟṟuppaṭai: 89-91).

The tiny sweet smelling white flowers of Mullai were the venerable favourite of the women folk. It has been compared to the pearl-like teeth of the maidens. On festive occasions and in the evenings Mullai flowers with grains of paddy were showered on the oil lamps as a mark of sanctity. If somebody dies in the hamlet women-folk did not decorate themselves with these flowers. A poet was trodding his tract to a king. He heard on his way that king was dead and so he was mourning and painfully walking on. He noticed a Mullai in blossom. He was annoyed and he went to the extent of rebuking the plant for having blossomed. "Oh Mullai! You too have flowered!"

Poets Help Identification

The Caṅkam poets have helped us to identify a few plants. It has been a great trial for some years to find out the correct Neital plant. The commentator, Nacciṉārkkiṉiyar, has equated Neital with karuṅ Kuvaḷai in Kuṟiñcippāṭṭu. It was a great task to pin-point Neital from its allies. Only by a process of elimination Neital has to be identified.

1. Neital is not Nīlam as both are separately mentioned (Maturaikkāñji: 250-1).

2. Neital is not Kuvaḷai as both are separately named (Kuṟiñcippāṭṭu: 63, 79; Paṭṭinappālai: 241).

3. Kuvaḷai is not Nīlam as both are named separately in a line Perumpāṇāṟṟuppaṭai: 293).

4. The commentators have clarified that Nīlam is not Nīlōrppalam (Tirumurukāṟṟuppatai: 253).

5. Nīlōrppalam is not Neital (Maturaikkāñji: 251).

We may sum up therefore that

there are two kinds of Kuvaḷai plants: Karuṅkuvaḷai and Ceṅkuvaḷai. Karuṅkuvaḷai is Neital Ceṅkuvaḷai or Kuvaḷai is Nīlōrppalam and Nīlōrppalam is Kaḻunīr.

After reviewing the notes provided by poets and commentators, the literature of botanists were compared for finding out the binomials for Neital. It was determined that both the Kuvaḷai plants belong to the genus *Nymphaea*. The botanical literature enumerates about one hundred species of *Nymphaea*.

It is unfortunate that most of the Caṅkam poets do not give the particulars of the plants they have mentioned. They speak of the flowers only. They have distinguished Karuṅkuvaḷai (i.e.) Neital as possessing blue petals while Ceṅkuvaḷai has red tint on the inner phase of the petals and blue outside. Both of them have been compared to the "eyes of damsels". But a later day saintly poet points out that the blue eyes of the Goddess resembling flowers of Karuṅkuvaḷai suddenly changed red in wrath resembling the flowers of Ceṅkuvaḷai when the Lord Siva on her side just glanced the Ganga Devi on his lock of tresses.

Fortunately for us a poet, Kuḍavāyil Kīrattaṉār, (Akanāṉūṟu 119: 11-13) has described the shape of the leaf of Neital as resembling the shape of the spear-blade. It is quite interesting that there is only one species namely *Nymphaea violacea*, Roxb. which has sagitate leaves with a deep cleft. But for this poet's description, it would have been impossible to find out the binomials of this Neital plant. In the same way some more Caṅkam plants were identified with the help of the observations of the poets.

Further the word Neital has been used in ancient times to denote numerical value also along with other flower names as follow:

One crore	10^{7}	= 1,00,00,000
Eight time the crore(i.e)	10^{56}	= Caṅkam
Eight times Cankam	10^{448}	= Vintam
Eight times Vintam	10^{3584}	= Aambal
Eight times Aambal	10^{28672}	= Kamalam
Eight times Kamalam	10^{229376}	= Kuvaḷai
Eight times Kuvalai	$10^{1835008}$	= Neital
Eight times Neital	$10^{14680064}$	= Veḷḷam

(Calculated on the basis of the clue given by Vibulānantha Aḍigal in his famous Yāḻ Nūl).

Poets Finding of a Botanical Truth

The water lily is botanically known as *Nymphaea pubescens* Willd. It belongs to the Nymphaeaceae family of the Polypetalous dicots. Several poets have spoken about the characteristic water habit, long and perforated leaf-stalks and flower-stalks, the humming insects kissing their buds to induce flowering in the morning, the various coloured blossom, like white, blue and red (*Nymphaea rubra)* and the smell that diffuses in the air. The poets have compared this smell to that emanating from the face and from the lock of hair of the sweet maidens in love. The flower-stalk has been carefully observed by the poets. While they have described that it possesses minute perforations accommodating air for its buoyancy they have noticed the beautiful pink dots when it is peeled of. These dots are due to anthocyanin dissolved in the cell sap. The poets have compared this beautifully coloured dots to the pleasant colour change of the maidens of beauty. Another feature about this plant which has caught the attention of a poet is worth mentioning. That is a physiological phenomenon of the flower during flowering. When a matured bud opens into a flower, the floral parts are activated and actually it denotes the movement of floral parts especially the opening petals. For this or any action energy is needed with which alone the bud can blossom into a flower. It has been well found out that a hormone is secreted in the floral axis and it induces the plant to flower. In addition to this a little energy is released by the breaking down of ATP stored in the bud. That energy is in the form of heat which activates the opening of the bud into flower. This heat can be felt even in an ordinary experiment of keeping a number of buds in a sealed vessel with a thermometer. It is interesting to note that a poet Marutan Iḷa-nāgaṉār has narrated this formation of heat during the opening of this flower of water lily in Naṟṟiṇai (290:1-3).

It is therefore a very close observation of a botanical truth by the poet who sings about the fresh flower of Aambal emitting a natural warmth in it. The botanists speak of this phenomenon in the physiology of flowering and have established this fact by experimentation.

Poets Excel Botanists in Observation

The Caṅkam poets are noted for their keen and close observation of nature but most of them have restricted their perception to flowers only. It is worthwhile to study deeply the poetic consideration of a trivial herbaceous runner Neruñci. It belongs to the dicot polypetalous family-Zygophyllaceae and it is called *Tribulus terrestris*, Linn. It grows in the open dry neglected places, the soil of which is not suited for anyother plant growth. It produces a number of long branches which trail on the ground on all sides with small green leaves and beautiful and bright yellow flowers. The tap root is of high medicinal value and this is one of the five roots mentioned in Ciṟu-pañchamūlam, a treatise of 18 smaller collections of Tamil literature.

The small pari-pinnately compound leaves, the bright yellow star-like tiny flowers with 5 petals and numerous stamens and the tiny and thorny fruits which become the seeds of this plant and its habitat have

been alluded to by the poets. It is said that this plant grows in deserted places, devoid of fertility.

Poetess Aḷḷūr Naṉmullaiyār sings that just like the beautiful and attractive appearance of the fresh yellow star-like blossom of this plant, the lover at first sight has been so charming and his affection for the beloved maiden has been inexplicably pleasant. But just like the flower whithers out, his liking and love for her, his beloved has not only been dwindling day by day but also has become a source of pain and sorrow just like its flower has matured into a thorny fruit as he has parted from her and that too in search of other damsels (Kuruntokai - 202).

It is of great interest for the Naturalists to note that the observations of Pāvaikkottilār has excelled those of even the modern Botanists. This plant *Tribulus terrestris* has a unique characteristic of changing the face of the flowers towards the moving sun. Therefore, they face towards east for the rising sun, turns gradually towards the west for the setting sun. This particular habit has not yet been recorded anywhere so far.

It has been observed that the sunflower, *Helianthes annuus*, moves towards the direction of the sun throughout the day. This feature is said to be Heliotropism (Bot.Gaz.29: 197). This movement of the plant is different from the photo-trophic movement (turning towards light) of plants and heliotropism is movement of the plant towards the sun. It is interesting to note these scientific observations of the ancient Caṅkam poets about 3000 years ago, is of greater interest to note that the poet has inserted this peculiar habit of the flower in his simile through the vociferous tongue of a damsel.

"Oh it is my fault that I did not go to the dance performance. It seems the house wife of Uran having been brought there in his chariot, passed slanders against me in the midst of women assembled. Had I been there, he would have been simply facing me where-ever I moved about just like the flowers of Neruñci *(Tribulus terrestris)* which move their direction according to the movement of the sun". This peculiar character of the flowers has been noted by a number of Caṅkam poets. This shows how closely the poets have observed the behaviour of plants, hitherto unnoticed even by Botanists. Arrangements for this study are being made to confirm this heliotropic movement of the flowers of his plant by specific scientific experimentation.

The Might of the Poetic Thought

One more fact about the strength of conviction of the ancient poets may also be noted here. Normally the Caṅkam poets have something to say and they know how to say it. They depict what they observe and sing what they feel in lively strain. There is no exaggeration.

We shall now deal with a particular instance where the poetic thought is exciting. It is about the flowering season of the Indian laburnum-*Cassia fistula*, Linn. This small tree belongs to the Polypetalous dicot family, Caesalpineae. This tree is often planted in gardens for its flowering beauty. Though it grows wild, it produces attractive yellow flowers in its long racemose

inflorescence during the rainy season. The flowering of this tree is concurrent with the beginning of the season. A lady-love is patiently waiting for her lover who promised to return at the onset of the rainy season. He has not returned as promised. The *cassia* tree has flowered indicating the onset of the monsoon. The lady love is pained and pines for his return. Her companion feeling that she won't bear the delay tries to console her saying that it is not yet the season and the *cassia* tree has blossomed foolishly mistaking the casual stray rain for monsoon (Kuruntokai : 66)

Still he has not returned and the lady is not able to bear his separation any longer. She accosts her companion, "Oh dear! Even when I am able to see the golden coin-like petals of *Cassia* are whithering and if you persist to say that it is not yet the rainy season, let me ask you "Am I dreaming?" (Kuruntokai 148). There is yet another poem dealing with the next stage. The lady love feels miserable. She is confident that the rainy season has already set in and he has not returned so far. Her prudence has reached the breaking point. Her companion finds no word of consolation. With a heavy heart she ponders over how to console her further. Having observed the worried mind of her companion the lady-love whispers,

"Though the fresh flowers of *Cassia* decorated on the tresses of the maidens on the street indicate the onset of the rainy season, I am not convinced as he would never tell a lie" (kuruntokai : 21).

One is moved along with the lady-love! It appears as if one witnesses the entire scence stage by stage. It is true that the lover has failed to return at the promised hour. It is also true that the *Cassia* trees have blossomed during the usual rainy season. At the first stage the companion utters a deliberate lie that the *Cassia* is foolish to mistake the unusual rain as the usual monsoon rain. At the second stage she is much worried when the lady-love questions her in anguish "Am I dreaming"? thereby indicating that she has realised the truth.

In the third stage both of them are pained to note that the lover has not returned at the promised time. The companion is at her wits-end to console her as the lady-love can no longer forbear the separation and she feels desolate. The prudent lady also is aware of the worry of the companion for her sake. Here the poet deliberately thinks fit to tresspass the limits of Natural truth without infringing the delicacy of the lady-love covering the unfortunate mishap of the lover-nay-setting his majestic promise still on the loving pedestal of her heart. Here lies the greatness of the poetic thought to create lively and living literature of lore for the milleniums to come!

Ancientary Nature on Cankam Plants

Though it is a bit difficult to arrive at the exact date of the Cankam Literature, it has been agreed by Historians beyond doubt that it is not less than 5000 years. It is therefore a logical sequence that the plants mentioned in this literature must have been growing in the Tamil land since then. There are nowadays some writers who blurt out without any scientific foundations that the sugar-cane plant is not indigenous to South India. They point out a line of Purananuru to prove that

sugar-cane was brought to his kingdom by Atiyamān Netumān Añci (Puranānūru: 99; 392) without even understanding the correct meaning and significance of these poems.

But in fact, sugar-cane was long back known to the Tamils. It is called *Saccharum officinarum* Linn. Dr. Janaki Ammāl and Dr. T.S. Rāgavan who have been working along with Dr. Darlington and Dr. Ruggalsgate of London, have postulated a theory published in the Journal of Genetics (1953) that the lower the occurrence of basic chromosome number, the older is the plant. Accordingly they found in sugarcane the basic chromosome number in meiosis during secondary association, is only four while its chromosome number is 2n = 80 (Janaki Ammal 1941).

In the same way we were engaged long ago (1961) in advanced research in Kunri (*Abrus precatorious*, Lin.). It is a long branched twiner with pink flowers and bright red seeds. We found that the basic chromosome number of this (Goldsmith's weighing bead) red seeded plant is only six (1961) while we confirmed its chromosome number 2n = 22. We therefore concluded long ago in our M.Sc. Dissertation (1961) that this Kunri plant must have been in existance since the Cankam age. This plant has been referred to in the Cankam Literature as not only Kunri but also as Kanni. We have dealt with this plant elaborately in our research project on "Plants of the Tamil Sangam Literature" (1987).

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SCIENTIFIC RESEARCH ON SIDDHA SYSTEM OF MEDICINE. (Inaugural Lecture-Siddha Chair)

J. Sadique

Introduction: While being a Biochemist, I developed an interest in the field of *Siddha* Medicine research from the time I served as a Lecturer in Biochemistry in the Govt. College of *Siddha* Medicine during 1974-1977. Valuable experiences gained from dissertation work of M.D (Siddha) students on the Clinical and experimental trial of *siddha* drugs for diabetes mellitus, pepetic ulcer etc.,were stimulants for me to continue in this area of research in Madurai Kamaraj University. The research activities on the chemical structure and biological activity of the compounds in medicinal plants are quite remarkable, all over the world. But the biochemical mode of action of medicinal plants is not well known in many medicinal plants. Lacuna in this knowledge may be due to scarcity of effort from Biochemists or due to difficulties in getting pure compounds in large quantities or both. So, now the efforts will be concentrated in this area. In this address, I am dealing with two aspects, one concerned with the fundamental aspects of *siddha* system of medicine and other with reference to the proposed research with earlier work in this area.

PART I

Fundamentals of *Siddha* System of Medicine: The Science of Medicine should have originated with the development of human civilization since this is essential to the preservation and well-being of human beings. There are two ancient systems of medicine in India, one that prevails in Southern part of India and other in Northern part of India. The former is known as *Siddha* System of Medicine and the latter is known as *Ayurveda*. According to tradition, it was God Śiva who imparted the knowledge of *Siddha* system of Medicine to his consort Goddess Pārvatī who handed it down to Nandideva and he to *Siddhas*. Therefore it is called 'Śaiva Sambradhāyam' (Tradition of God Śiva). The recorded history of Tamil Civilization is thousands of years old. The *Siddha* system of Medicine took care of the health of the Tamils. The term *siddhi* means 'achievement' and *Siddhas* were men who achieved certain results in medicine through the practice of *Yoga*. This knowledge was handed over to pupils by *siddhas*.

The origin of *siddha* system of Medicine is attributed to sage Agastya who was the founder of Tamil Language. The *Tirukkuṟaḷ* and *Tirumandhiram* carry some references about this system of medicine. It is being said that *18 siddhas* existed and they nourished *siddha* system of medicine.

The *siddhas* advocated man and nature as one. Man is said to be the microcosm and the world, macrocosm. In other words, what exists in the world exists in man:

அண்டத்தில் உள்ளதே பிண்டம்
பிண்டத்தில் உள்ளதே அண்டம்
அண்டமும் பிண்டமும் ஒன்றே
அறிந்து தான் பார்க்கும் போது

(Cāṭṭaimuṉi, ñānam)

Universe according *siddhas* is made up to five elements, viz., (1) Earth (2)Water (3)Fire, (4)Air, (5)Ether. Similarly, the human body is made up of the above five elements. Earth constitutes bone, flesh, nerves, skin and hair. Water forms bile, blood, semen, secretion and sweat. Fire gives birth to hunger, thirst, sleep, beauty and indolence. Air goes for contraction, expansion and motion. Ether is found in the interspaces of stomach, heart, neck and head. These are the basic characteristics of 'Pañchabūthic Theory' in *siddha* system of Medicine. In natural existence, these elements are found to be mixed up and likely to be changed from one to another (1).

Humoral Pathology: There are three essential factors in the composition and constitution of the human body and these factors are known as humours. These factors are designated as *vāt am, pittam* and *kabam* (wind, bile, and phlegm) which exist in a definite ratio (1:½:¼). The external air corresponds to the internal *vāyu*. The external heat corresponds to internal *pittam* and the external water corresponds to internal phlegm. Man is thus linked with the external world. So, any change in the elementary condition of the external world has its corresponding change in the human organism. In each cell in the body, these three factors co-exist and function harmoniously. If these three function normally, health is maintained. When the equilibrium is upset, the body becomes diseased. The humours predominate in human beings in accordance with the nature, stage of life end with varying seasons. In the first one third of the life span, *vātam* predominates, in the second one third *pittam* and in the last one third *kabam*. This is *siddha* concept. Drugs which are used for cure of diseases and for maintaining the equilibrium of the humours are also made up of five elements. The correction of the inequilibrium is made by substituting the drug which is of the opposite nature. Dry and cold are the characteristics of *vātam*. If *vātam* is vitiated, the body becomes dry and cold. So, the treatment is to apply the opposite of these, namely, oil and warmth. The humours are also made up of the five elements, as the drug is also made up of five elements. The equilibrium can be restored by supplementing with drug of the same characterstics when humours are decreased. For instance, *vātam* is formed by basic elements *ākasam* and vāyu. If *vātam* is found decreased, a drug that is predominant in *ākasam* and *vāyu* can be administrated to restore the decreased *vātam* to its normal level. This can be also suitably explained by the following analogy. If *pittam* is increased, warmth is produced. To decrease pittam sandalwood is administered internally or externally because of its cooling effect. It is not necessary that in disease, a single humourmay be affected and it may involve different humours to different extent. So it is warranted to administer a combination of drugs that will correct disordered humours. So, the treatment becomes a complex one. It needs traditional expertise of the indigenous medicine practitioners.

The Drugs: The *siddhas* were striving hard to attain *Jivan Mukti* through *Yoga*

and medicine. The medicines that were used to keep the body healthy for longer years are known as *'Kāya Kalpa* drugs'. In *Āyurveda*, mostly drugs of vegetable origin have been used. But, *siddha* system utilizes metals and minerals for drug preparation. In addition, drugs of animal origin are also used in the Siddha system of Medicine. Siddhas were advanced in the knowledge of chemistry and they were well acquainted with alchemy, the science of conversion of base elements into Gold. The main aim of *siddhas'* in using metals and minerals in the preparation of medicine was to evolve drugs that would arrest the decay of the body. In other words, these drugs will promote longevity. (2). Compared to drugs from vegetable origin, those from metals and minerals could remain potent over a long period of time. *Siddhas* used acids, alkalies, salts, poisons and precious stones in the preparation of drugs. They had the pharmaceutical expertize of converting hard and insoluble metals and minerals into therapeutically potent *parpam* and *cendūram* using calcination process. If the metals were to be heated without pretreating with herbal juices, it is impossible to prepare such powdery drugs. They also used extensively mercury and other heavy metals in the preparation of the drugs. They were able to convert liquid mercury into the solid form with the use of herbal juices and other elements. This process gives rise to *kaṭṭu.* This preparation is reputed in *Siddha* system of medicine because high therapeutic benefits are claimed to be achieved by giving very small doses to patients. The other preparations have herbal origin. These include cūraṇams, decoctions, legiyam and *tailam* etc. When the *Siddha* drugs are administered, especially, drugs of metal and mineral origin, vehicles are used. Joseph Das has elegantly demonstrated that vehicles are *aṉupāṉams* which are able to increase the potency of the drug and minimize the toxicity. (3). *Siddhas* have advocated a regimen of diet during drug administration. This goes by the name *pattiyam.* They have practised this in order to potentiate the therapeutic effects of the drugs and to minimize the toxicity. This kind of practice is not found in modern systems of medicine. In preparing *parpams* and *cendūrams* from hard metals, *Jayanīr* and *Müppu* have been used. The latter aids in the process of Calcination (2). The inorganic drugs have been classified as 'enemy' and 'friend' drugs on the basis of their mutual interactions and compatibility and incompatibility. The compatible drugs, when they are used for the preparation of *parpam* or *cendūram,* show greater potency, whereas the incompatible drugs antagonize each other or show a reduced potency (2). The drugs are assigned with six different tastes. It is believed that the drugs with distinct taste are curative for certain types of diseases. Traditional systems of medicine have always based their therapeutics on an array of concepts that differ so much from those of western medicine. In general, the multi-component prescription or polyprescription is administered in the form of 'decoction'. The underlying therapeutic rationale is the 'whollistic approach' where it is contented a whole drug or a group of drugs will be more effective than a single component. This could be rationalized in several ways; by postulating synergistic activity and complementary activities where one component counteracts the ill effects of another component by solubility factors where an

increase of solubility increases bio-availability or the decrease insolubility of a toxic constituent renders the preparation as a whole less toxic (73).

Methods of Diagnosis: The *siddhas* were aware of the importance of diagnosis of the diseases in the treatment. "Nōy Nāḍi, Nōy Muthal Nāḍi" refer to the process of diagnosis. Nōy Nāḍal means the approach to the disease and Nōy Mutal Nāḍi refers to assessment of the etiology of the disease. Diagnosis is based on examination of eight entities. They involve pulse, eyes, voice, touch, colour, tongue, faeces and urine. This is the 'ashtasthana pareeksha' mentioned in the *Agastiya Vaidya Sāgaram*.

***Nāḍi* Examination:** The science of pulse is very important in the *siddha* system of medicine (2). It is a distinct science of *siddha* system of medicine. There are innumerable works written by different authors in Tamil viz, Agasthiya, Tirumūlar, Yūgimuṉi, Tērayar, Bōgar, Rāma Devar etc. The world pulse means beating of artery felt with the tip of the finger or fingers at the wrist. Its rate and character go to indicate a person's conditions of health. The science of pulse is based on *Muppiṉi* The pulse according to siddha science is divided into five kinds. (1) *Vādha Nāḍi*, (2) *Pita Nāḍi*, (3) *Aiya Nāḍi*, (4) *Budha Nāḍi*, and (5) *Guru Nāḍi*. It has got further sub-divisions. The examination of pulse is the best criterion of the phenomena and progress of the disease and prognosis. Galen, the great Greek physician also described the pulse. So the Greek physicians also followed the pulse examination as *siddhas*. When the harmony of three humours (air, bile and phelgm) gets deranged, owing to a relative increase or decrease of one or more of the principal humours, disease or death will be the result which would be indicated by the pulse. Eventhough the science of Nāḍi was widely practised by *siddhas*, the present Siddha practitioners have lost their touch in this importrant area of diagnosis. It is a very sad situation. A revival of interest in research on Nāḍi is needed to cherish the most important Siddha sciene of Nāḍi diagnosis.

Nīrkuṟi 'Urine' Examination: Tērayar has written on the subject of urine examination under the caption *Tērayar nīrkuṟi Ney Kuṟi*. In this book, Tērayar describes the colour and consistency of urine in different *dhosas* and diseases and also explains how the spreading pattern of a single drop of oil on the surface of the urine indicates not only vitiation of *dhosas* but also the prognosis. The research is warranted on how the changes in the chemical composition of the urine in different diseases alter the shape of the oil on the surface of the urine. Similarly, other characteristics of urine such as density, smell, froth and quantity are also useful in the diagnosis of the disease.

The Eyes: The *kaṉ* 'eye' will indicate not only the physical ailment, but also the mental conditions and emotions. The state of the eye differs depending on the prevailing *dhosas*. So "eye examination" is useful in the diagnosis of the diseases. Similarly, the voice, touch, colour of the body, nature of tongue and faeces also aid in the diagnosis of the vitiated humours. From this, it is understandable that *siddhas* had developed proper methods for the diagnosis and prognosis of the diseases.

PART II

What is the Relevance of *Siddha* Medicine in the world of Western Medicine?

Modern medical science is advancing by leaps and bounds and is providing health care in modern society. However, some of the drugs offered in the modern systems of medicine are cytotoxic and cause some times serious side effects. Contribution of modern medical science in the field of surgery is praiseworthy. Because of the high cost, this system of medicine is not reaching the poor people. According to Lattif *et al* (4) 3/4 of the population in the developing countries depend on indigenous medicine for the maintenance of health.

The World Health Organization strives hard to achieve "Health for all by 2000 A.D." Prof.V.Ramalingaswamy, Director-General of Indian Council of Medical Research, explains 'Health for all by 2000 A.D.,' as signifying that each country will embark upon a process of health development with its own resources and its own socio-cultural pattern which will permit all its citizens to lead socially and economically productive lives by A.D 2000. (5). Health is both a major pathway to human development as well as the end product of it.

Prof.Ramalingaswamy further advocates that traditional systems of medicine in India can make a lasting contribution to the numerous components of the primary health care approach and through it, the goal of Health for all by 2000 A.D. The importance of the traditional systems of medicine in any country can be recognized from the fact that in China a plant *Artemesia annui* has been used for 2000 years for the chills and rigours, (5). Recently, the Chinese scientists have shown that a neutral extract of artemesia was able to cure the malaria of *Plasmodium vivax* and *falciparum* and this is the plant drug now available for the containment of falciparum malaria. Sri Ramanath Chopra had dedicated his whole life to locally produced and locally available indigenous resources for achieving self-sufficiency in drugs, and had great enthusiasm to explore the secrets buried in the indigenous systems of medicine of India. His concern was to use the most up-to-date methods of science, in evaluating these remedies through inter-disciplinary approach. The first systematic Pharmacological study of Rauwolfia for blood pressure and central nervous system was carried out by him in 1933 Applying scientific methods to ancient insights and revelations, experiences and empirical knowledge is an endeavour of profound significance. The snakeroot plant of India, the leaf of foxglove plant of England, the Coco leaves of Peruvian Incas, the yellow astringent of Chinese physicians whose alkaloid extracts today we know contain ephedrine and the extract from South American poison dart that we know today as curare, are examples of a long list of substances treasured over generations as valuable in the form of legend. Campbell (6) also underlines the importance of research in the field of alternative medicine for the dieases which are not cured by Western medicine and he has coined the term 'Complementary medicine' for traditional medicine. Through the application of scientific methods, we will search and research and discover

hidden secrets of the *siddha* system of medicine.

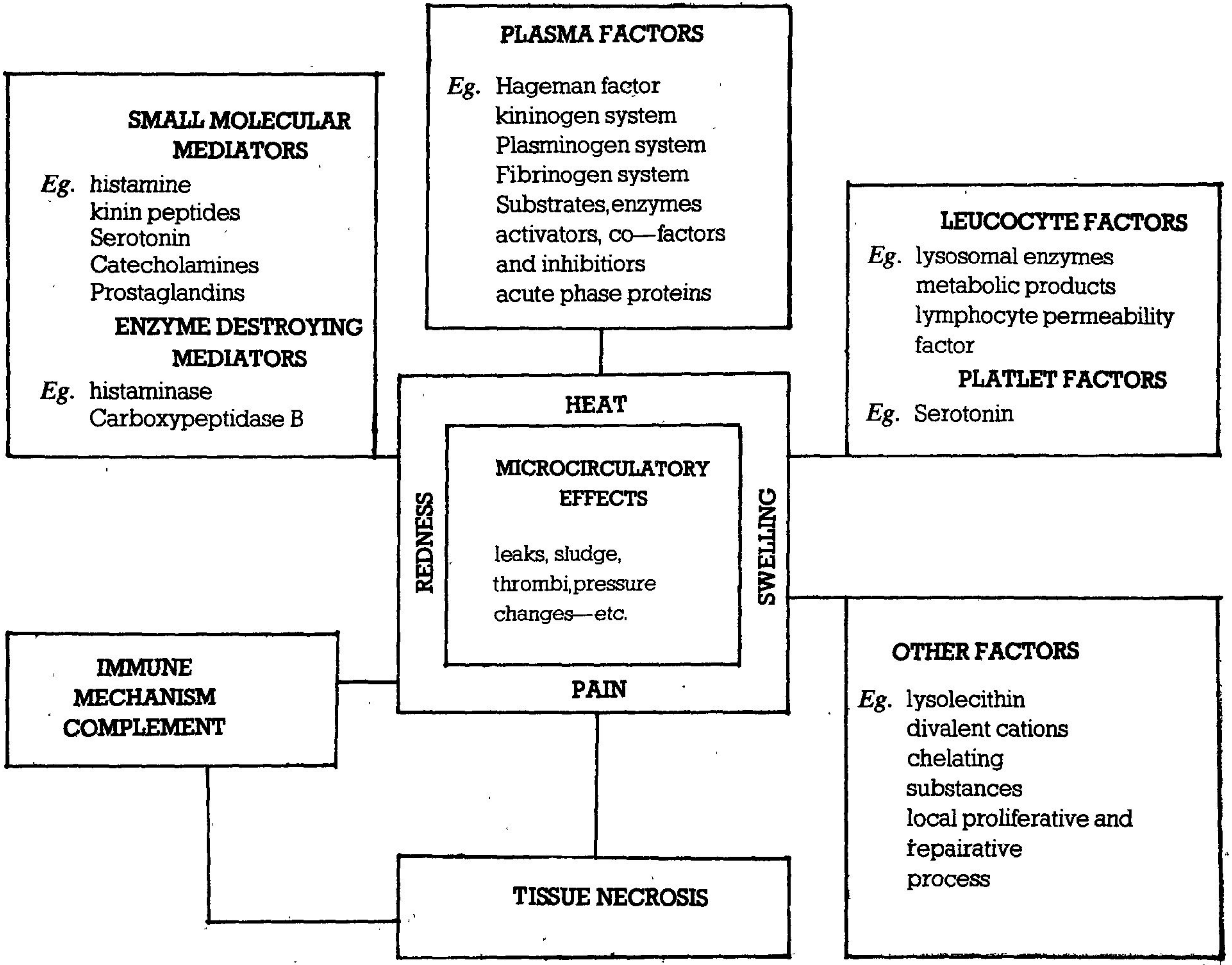
The first part has dealt with the fundamentals of the *siddha* system of medicine and the importance of modern research needed tc elucidate the beneficial effect of *siddha* drugs. The following section will be dealing with the projects that have been either initiated or under consideration for subsequent initiation.

Anti-Arthritic Drugs: Human Rheumatoid arthritis is a chronic musculoskeletal disorder thar causes severe pain and suffering to human patients. Because of this disease, the industries lose much of working hours due to incapacitation of the industrial workers. In U.S. about 17 million people have been affected by one or other form of arthritis (7). In India also, even though the exact statistics and not available, an increased incidence is seen in the elderly people. At present, the currently available synthetic drugs like aspirin, indomethacin, steroids etc., After only temporary relief. But side effects such as gastric ulceration, bleeding in the stomach, pathological changes in the blood clotting mechanism are common. So, it is highly necessary now to find out a drug from *siddha* systems of medicine with properties to offer a permanent relief for human rheumatoid arthritis with minimum side effects.

Before going into the details of the earlier literature on the indigenous anti-inflammatory drugs, it has to be mentioned that in modern drug research, one out of 10,000 compounds tested reaches a stage being marketed and this involves a research cost of 25 million. U.S.dollars in developed countries (8). This will give us an idea how much money and efforts are involved in the drug research. Eventhough it may not be possible to invest such a huge sum of money on drug research in the developing countries, the minimum investments on the previously popular indingenous remedies will bear fruit. With this hope, research in this area has been initiated in the department of *siddha* medicine, Tamil University.

Review of the earlier work on anti-inflammatory medicinal plants: Much of the work has been carried out by various medical colleges in India in the screening of the A.I. activity of the medicinal plants in animal inflammatory models (9-69) *(Annexure I)*. The models that have been used are either the acute inflammatory model or the chronic inflammatory model or both. Mostly either crude medicinal plants or organic solvent extracts of the medicinal plants have been used for the screening purposes. Unfortunately, *much work is not found* with regard to the mechanism of action of either crude drugs or isolated active compounds. Similarly, in the developed countries, the anti-inflammatory work has been confined to the above said aspects but the chemical mechanism of action has been elucidated for a few compounds from medicinal plants (71). Before describing the proposed research, it is essential to give a brief outline of inflammation and anti-inflammation.

Inflammation is asociated with the cardinal signs of redness, heat, pain and swelling (72). This is a homeostatic phenomenon (74). When tissue is injured, the body adopts this mechanism to contain the inflammation and repair the damaged tissue. If the inflammation subsides within a a few days, it is known


PLASMA FACTORS
Eg. Hageman factor
kininogen system
Plasminogen system
Fibrinogen system
Substrates, enzymes
activators, co—factors
and inhibitiors
acute phase proteins
SMALL MOLECULAR MEDIATORS
Eg. histamine
kinin peptides
Serotonin
Catecholamines
Prostaglandins
ENZYME DESTROYING MEDIATORS
Eg. histaminase
Carboxypeptidase B
LEUCOCYTE FACTORS
Eg. lysosomal enzymes
metabolic products
lymphocyte permeability
factor
PLATLET FACTORS
Eg. Serotonin
HEAT
REDNESS
SWELLING
PAIN
MICROCIRCULATORY EFFECTS
leaks, sludge,
thrombi, pressure
changes—etc.
IMMUNE MECHANISM COMPLEMENT
OTHER FACTORS
Eg. lysolecithin
divalent cations
chelating
substances
local proliferative and
repairative
process
TISSUE NECROSIS

as acute inflmmation. If the inflammation persists for a longer period, it is known as chronic inflammation (75).

The mediators of inflammation are histamine, kinin system and prosta glandins (76). The earlier phase of carragenin inflammation is maintained by histamine and kinin system, and sustained inflammation is maintained by prostaglandin (77). When the tissue is injured with a noxious agent, the leukocytes migrate to the inflamed site and wage a war wo neutralise the ill effects of the foreign agent (78, 79). In the process, the Lysosomes present in these cells get damages resulting in the release of the hydrolytic enzymes that cause extensive damage to the surrounding tissue (80, 81). This gives a fairly simpler picture of inflammation. The events that follow the human rhematoid arthritis can be seen from the following diagram (77).

If the inflammation is left to itself, it will be relieved by the modulating factors present in the human system. In rheumatoid arthritis, it is suggested that there is a malfunctioning of the homeostatic mechanism. So, the currently available drugs are not able to cure human rheumatoid arthritis.

Mechanism of action of Anti-Inflammatory drugs: It has been found that major mechanism involved in the A.I. compounds are through (a) inhibition of synthesis of prostaglandin (b) stabilization of lysosmal membranes, (c) inhibition of connective tissue metabolism.

Most of the anti-inflammatory compounds are suggested to inhibit prostaglandin synthetase enzyme but not lipoxygenase enzyme that gives toxic products likehydroperoxy acids. This is said to be one of the reasons for the failure of the current drugs in the therapy of inflammation.

The Plan of Work: Sixty drugs comprising siddha medicinal plants and compound drugs (See Annexure II) will be screened for anti-inflammatory activity in carrageenin induced inflammation in rats, (82). Similarly these drugs will be also tested in adjuvant induced arthritic rats (83). It has to be mentioned that adjuvant arthritis resembles human rheumatoid arthritis in many symptoms (84). So the drugs that have been found effective in adjuvant arthritis have been also reported to be useful in human rheumatoid arthritis (85). The most effective three drugs will be subjected to chemical extraction and identification of active principles.

These drugs will be subjected to thorough investigation on various biochemical aspects (a) membrane stabilization of lysosomes, (b) the inhibition of prostaglandin synthetase and lipoxygenase, (c) inhibition of histamine and kinins, (d) studies on connective tissue metabolism, (e) acute phase proteins, (f) mitochondrial energy transduction, (g) intestinal absorption, (h) complement studies, (i) trace elements analysis.

Long time Anti-arthritic activity: These drugs will be administered to adjuvant arthritic rats for 15 days along with a steroid as a reference compound. The long time anti-arthritic activity will be screened in the same rats without administering drugs after 15 days at various intervals over a long time by

arthritic score, radiological score and plasma inflammation units.

The toxicity, both acute and sub-acute, will be screened in rats and rabbits for these drugs.

The clinical trial: The most effective drug will be screened in human rheumatoid patients for beneficial effects with the help of modern physicians.

Anti-hepatotoxic effect of Siddha Medicinal Plants: Jaundice is an epidemic disease that is prevalent in India. So far, modern medicine does not offer any cure for this liver disorder. In *Siddha* system of medicine, *Phylanthus* niruri,*Eclipta alba, Curcuma longa and Terminalia chebula* (86) are claimed to cure jaundice. So these have been chosen for the assessment of their beneficial effects on the Carbontetrachloride induced fatty liver in rats. The assessment of the beneficial effects is done from the following studies. Serum enzymes, such as, GPT, alkaline phosphatase, Gamma glutamyl transpeptidase, billirubin, A/G ratio and histopathology of liver, will be studied in assessing the beneficial effects. The active principles will be isolated by chemical procedures and the structure of the active principles will be identified. The mechanism of action of the effective compounds especially on mitochordial energy transduction process, microsomal cytochrome P450 activity, lipid peroxide levels, the immuno electrophoretic pattern of serum proteins and mode of synthesis of proteins in liver will be studied. The toxicity of the compounds will be also assessed.

In vitro culture of medicinal plants and assessment of therapeutic effects: Medicinal plants will be cultured in agar media to induce Callus from the tissue obtained from different parts of individual plants. The Callus tissues grown on agar media will be transferred to suspension culture in the presence of hormones. After the successful establishment of Callus and suspension culture of medicinal plants, the biological activity of the medicinal compounds present in callus as well as in suspending medium will be screened for liver disorder and arthritis. The plants that will be investigated will be *Clerodendron inerme, Enicostemma veticellatum, Eclipta alba* and *Phylanthus niruri.*

Wound Healing Studies: The wound will be induced by incision and excision method in rabbits. The *Siddha* preparations such *arukampul tailam* and *Rombarakku* will be tried in rabbits as well as in human beings. ESR and fibrinogen content will be measured.

The Assessment of the Efficacies of Siddha Preparation By Different Methods: In *Siddha* literature different methods of preparation for the same drug is suggested. For instance, *Caṅku paṛpam* is prepared by three different methods by treatment with different herbal juices. As suggested in literature (70), these drugs will be prepared. In addition, a control without any application of herbal juices will be also prepared. The total calcium content, ionic calcium content and total alkalinity of *caṅku paṛpam* will be meaured. The effect of these preparations on the fibrin

formation in plasma will be assessed. The influence of different quanta of heat on these preparations will also be studied. This will be able to throw light on the pharmaceutical expertise of *siddhas* in the preparation of potential drugs.

Studies on The Anti-Diabetic Effect of Siddha Preparations: From time immemorial until the discovery of insulin in 1922, diabetes mellitus was treated with herbal drugs along with diet and exercise (87). The oral herbal remedies for diabetics are much simpler than injection of insulin everyday. The oral hypoglycemic drug bi-guanides cause lactic acidosis. And this drug has been abandoned in developed countries. Sulphonyl ureas affect longevity. So, it is imperative to find from the treasures of *siddha* medicine an effective hypoglycemic agent. A list of the medicinal plants that were screened to be effective is given in Annexure III (87). A list of drugs (Annexure IV) will be screened in alloxan induced diabetes mellitus in rabbits. The other biochemical studies such as lactate-pyruvate ratio in blood, serum proteins pattern, trace elements, liver glycogen content. and liver inducibile glycolytic enzymes will be studied in case of the effective hypoglycemic agents.

Development of Herbal Garden: The herbs will be cultivated both in plots and pots. The experiments will be carried out for producing mutants with high yield of active principles. A glass house will also be developed for the maintenance of plants which grow in temperate climates. In Soviet Russia, the diseases of the patients are cured through visit of patients to the herbal garden. For each disease a separate area cultivated with the curative medicinal plants has been developed. A similar attempt will be also carried out for assessing the beneficial effects of different herbs for different diseases, through inhalation of the medicinal air.

Invited Lectures in National/International Conferences:

1. National Seminar on Solanaceae, Bharathithasan University, July, 1983.
2. International Seminar on Medicinal and Aromatic plants, CIMAP, Lucknow, December, 1983.
3. International Seminar on Chemistry of Natural products and Binational US – Pakistan workshop, Karachi, February, 1984.
4. World Conference on Inflammation, anti-rheumatics, analgesics, immuno modulators, Venice, April, 1984.
5. IUPHAR-IX International Congress of Pharmacology London, July, 1984.
6. Inflammatory mediators Symposium London, August, 1984.
7. 5th Asian Symposium on Medicinal Plants and Species (UNESCO— 5th ASOMPS) Seoul, Korea, August, 1984.
8. International Symposium on Inflammation and anti-inflammatories., Jammu–Tawi, November, 1984.

ANNEXURE - I

Some of the recent reports on anti-inflammatory activity of Medicinal Plants:

Sl. No.	Name of the Medicinal Plant	Reference No.
1.	*Acanthus Illicifoiius*	9
2.	*Acer crataegifolium*	10
3	*Alpinia Calcarata*	11
4.	*Alpinia chinensis*	20
5.	*Anacardium occidentale*	12
6.	*Anisomeles ovata*	13
7	*Antidesma menasu*	14
8	*Arnebia hispidissima*	49
9.	*Aralia cachemerica*	15
10.	*Artemisia capillaris*	16
11.	*Atractylodes japonica*	17
12.	*Azadirachta indica*	18,19
13.	*Balsamodendron mukul*	20,60
14.	*Balduina angustifolia*	21,22
15.	*Boerhaavia diffusa*	69
16.	*Calophyllum inophyllum*	23,24
17.	*Canscora decussata*	25
18.	*Commiphora mukul*	11,26-28,69
19.	*Coptis japonica*	29
20.	*Cassia fistula*	69
21.	*Crataeva nurvula*	11
22.	*Croton lechleri*	30
23.	*Cryptolepsis sanguinotenta*	31
24.	*Curcuma amada*	32
25.	*Curcuma longa*	23,34,69
26.	*Cyperus rotundus*	35,69
27.	*Datisca cannabina*	36
28.	*Echinopanax elatum*	37
29.	*Elephantopus mollis*	21,22
30.	*Echinops latifolia*	38
31.	*Elephantopus carolinianus*	21
32.	*Ephedra intermedia*	39,40
33.	*Eupatorium formosanum*	21,22
34.	*Eupatorium hyssopifolium*	21,22
35.	*Fagopyrum cymosum*	41
36.	*Garcinia mangostana*	42
37.	*Guarea guidonia*	43
38.	*Glyzyrrhizia glabra*	69
39.	*Helenium amarum*	21,22
40.	*Hibisus vitifolius*	44
41	*Ipomoea turpethium*	45
42.	*Lawsonia inermis*	46
43.	*Madhuca longifolia*	47
44.	*Mesua ferrea*	24
45	*Myrtus communis*	48
46.	*Ochrocarpus longifolius*	49
47.	*Olax androneusis*	50
48.	*Olax glabrifora*	50
49.	*Olax psittacor ium*	50
50.	*Pavonia moutan*	51
51.	*Phyllanthus embellica*	60
52.	*Paederia foetida*	11
53.	*Piper longum*	11
54.	*Psoralea corylifolia*	44,52
55.	*Pterocarpus santalinus*	45,53
56.	*Pyracantha crenulata*	54
57.	*Pluchea lanceolata*	69
58.	*Rhei rhizoma*	55
59.	*Ricinus communis*	56,69
60.	*Salvadora persica*	57
61.	*Salvia miltiorrhiza*	58
62.	*Sapindus mukorossi*	59
63.	*Sapindus trifoliate*	60
64.	*Semicarpus anacardium*	11,56,61,69
65.	*Sida rhombifolia*	11
66.	*Solanum xanthocarpum*	62
67.	*Terminalia belerica*	60
68.	*Terminalia chebula*	11,60
69.	*Tinospora cordifolia*	11,63,69
70.	*Trigonella foenum graecum*	64

71. *Tripterygium wilfordii* 65
72. *Tylophora indica* 66
73. *Vitex negundo* 11
74. *Vanda roxburghii* 69.
75. *Withania somnifera* 11,67,-69
76. *Zingiber officinale* 11

ANNEXURE - II

A list of proposed medicinal plants and Siddha drugs to be screened for anti-inflammatory activities (70,86,88,89).

1. *Acacia pennata* (linn) willd.
2. *Alangium salvifolium* (Linn.f)
3. *Alpinia Speciosa* Schum
4. *Anacyclus pyrethrum* DC
5. *Calophyllum inophyllum* Linn
6. *Canarium strictum* Roxb
7. *Cassia fistula* Linn
8. *Celastrus paniculatus* wild
9. *Corallocarpus epigaeus* benth.ex Hook.f
10. *Crataeva religiosa* Hook.f.& homs
11. *Eclipta prostrata* Roxb
12. *Erythrina indica* Linn
13 *Evolvulus alsinoides* Linn
14. *Gmelina asiatica* Linn
15. *Gossypium arboreum* Linn
16. *Gynandropsis gynandra* (Linn)
17. *Hemidesmus indicus* R Br.
18. *Merremia tridentara* Hallien f.
19. *Mollugo cerviana Ser.*
20. *Myristica fragrans* Houtt
21. *Pavonia odorata Wild*
22. *Pergularia extensa* N.E.Br.
23. *Plumbago indica* Linn
24. *Seussurea lappa* C B.Clarke
25. *Semecarpus anacardium* Linn f.
26. *Sida cordifolia* Linn
27. *Smilax china* Linn
28. *Solanum xanthocarpum* Schrad & Wendl
29. *Trianthema decandra* Linn
30. *Vitex negundo* Linn
31. *Enicostemma verticellatum* Blume
32. *Symplocos racemosa* Roxb
33. *Trigonella foenum gracum* Linn
34. *Delonix elata* Gamble
35. *Albizzia lebbeck* Benth
36. *Hydrocortile asiatica* Linn
37. *Homalnmena aromatica* Schott
38. *Ludwiga parriflora*
39. *Sida acuta*
40. *Asarum europaeum* Linn

PARPAMS AND CENDŪRAMS

41. *Ayavīra cendūram*
42 Steel *parpam*
43. *Kandha cendūram*
44. *Cembu parpam*
45. *Nāga parpam*
46. *Tanga parpam*
47. *Velvanga parpam*
48. *Velli parpam*
49. *Rasa parpam*
50. *Chandarasa parpam*
51. *Mahāvīra melugu*
52. *Nava uppu melugu*

TAILAM AND LĒGIYAM

53. *Melugu tailam*
54. *Nathai choriyennai.*
55. *Nochi kulambu*
56. *Arukati tailam.*
57. *Caturvagaichatrin tailam.*
58. *Murungai vēr tailam*
59. *Cīraga tailam*
60. *Mahā Nārāyana tailam.*

ANNEXURE - III

A list of medicinal plants that have been found to be effective in diabetes mellitus by experimental/clinical methods (87).

Sl. No.	Name of the Herb (Botanical) and Local)
1.	*ATRIPLEX HALIMUS* Salt Bush

2. *CASEARIA ESCULENTA.*
3. *COCCINEA GRANDIS or Cephalandra indica*
   Ivy Gourd
4. *LABLAB NIGER* or *DOLICHOS LABLAB*
   Hyacinth Bean, Lablab Papaya Bean, Egyptian Kidney Bean
5. *EUGENIA JAMBOLANA*
   Java Plum, Jambolan
6. *CYAMPOSIS TETRAGONLOBUS*
   Guar Gum
7. *GYMNEMA SYLVESTRE*
   gurmar
8. *CENTELLA ASIATICA*
   Centella, Indian Pennywort
9. *LUPINUS ALBUIS* sub sp. *ALBUS*
   (Egyptian Lupin)
10. *MOMORDICA CHARANTIA*
    Bitter gourd, Balsam Pear
11. *ORTHOSIPHON STAMINEUS*
    (Jawa Tea).
12. *SARCOPOTERIUM SPINOSUM'*
13. *QUERCUS LANCEAEFOLIA*
14. *SAḶACIA RETICULATA*
15. *SOLANUM SANTWONGSEI*
16. *TRIGONELLA FOENUMGRAECUM*
    (Fenugreek, Fenugrec)

ANNEXURE - IV

Anti-diabetic *siddha* and herbal drugs to be selected (86, 88)

1. *Ficus bengalensis*
2. *Coccinia cordifolia*
3. *Terminalia chebula*
4. *Strychnos potatorum*
5. *Allium ceba*
6. *Eugenia jambolana*
7. *Cassia auriculata*
8. *Tinospora cordifolia*
9. *Abiraga cendūram*
10. *Gowri chintāmaṇi*
11. *Nāga cendūram*
12. *Talāga cendūram*
13. *Tiratcādi cūraṇam*
14. *Mahā vasantha gurumagaram*
15. *Kendi meḻugu*
16. *Sāti šambira kuḻambu*
17. *Van meḻugu*
18. *Asparagus racemoses Ney (Tannīr Viṭṭan Ney)r)*
19. *Kandha parpam*
20. *Citrullus colosynthis*
21. *Salvadora persica*
22. *Solanum xanthocarpum*
23. *Morus Alba*
24. *Agaricus campestris*
25. *Trichosanthes palmata*
26. *Phoenix sylvestris*
27. *Phoenix dactylifera*

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Note: The arrangement of bibliographical references is not altered in tune with our style sheet as requested by the author.

COMMENTS AND ANSWERS

1. Dr.C.R.Krishnamurti, Co-ordinator, Department of Environment, Anna University, Madras presided over the Inaugural lecture. His comments were

that the ancient *Siddha* drugs should be traced from old *Siddha* literature and their efficacies should be established on scientific basis.

2. Prof. M. Lakshmanan, School of Biological Sciences, Madurai Kamaraj University, also expressed similar ideas. He suggested that sophisticated instruments should be used in the scientific evaluation of *Siddha* drugs.

3. Dr. Kalifathullah, Unani Physician, Madras, suggested that the drugs that are being commonly used should be taken up for verification studies.

4. Dr. V. Subramanian, principal, Government College of Siddha Medicine, Palayamkottai, felt that scientific studies are warranted in the Nadi examination.

Many letters of comments were received from eminent scholars from India and abroad. The comments and answers are given for a few of them.

5. Dr. C. Damodaran, Asst. Director, Tamil Nadu Forensic Laboratory, Madras-4.

1) Scientific probing of Siddha Medicine on modern lines has never been done precisely in the past; the present approach from biochemical pharmacology angle is correct and laudable.

2) The diseases chosen for the study are of much and immediate relevance to the Society-especially in Tamil Nadu.

3) Novel ideas of tissue culture and herbal garden possess elements of worthy pragmatism.

6. Dr. M. Manzuri-i-Khuda, Director, BCSIR Laboratories, Chittagong, Bangladesh.

I read with interest the principle underlying the system and I feel quite confident that a proper screening will indicate the positive value of at least some of the preparations. During my earlier investigations on plant products, I came across a number of preparations isolated from plants which when dispensed in their "natural" form, without being broken into or separated into their components showed pharmacological activity. The "broken into" term is used to indicate "breakage" of any loose bonding or natural affinity by use of acids, alkalis etc., which was seen to drastically reduce activity. Indeed, some particular varities of plant products, showed anti-diabetic activity but did not display hypoglycaemic action on normal animals or patients. ***Rauwolfia Serpentina*** and related species showed marked hypotensive action in their "natural complexes" e.g. ***Serpajmaline*** without any side effects and without the presence of Reserpine (the purified "active" ingredient). I shall be happy to hear about progress of your investigations.

There appear to be some printing mistakes left un-noticed. Besides a few others, on page-1., 2nd para 9/10th line, "Tamil Civilization millions of years old" should read "Tamil Civilization is thousands of years old" (***Homo sapiens sapiens*** is only about 25,000 years old).

ANSWER by Prof. *J. Sadique*

I agree with Dr. Manzur-i-Khuda that *Tamil Civilization* is thousands of years old. This has been modified.

7. Dr C.B. Manavalan, Retd. Professor of Siddha Medicine, Madras-8.

I am extremely happy to offer my humble comments on the inaugural lecture of Dr. Sadique.

Before doing it, I like to say a few words on the present state and trend of modern science. Human knowledge has become unmanageably vast, every science had begotten a dozen more, each subtler than the rest, physics found a universe in the atom, and biology found a microcosm in the living cell; physiology discovered inexhaustible mystery in every organ, psychology in every dream.

THE OBJECT OF MODERN MEDICAL SCIENCE.

"The human body has been examined from every angle, cut into thousands of different sections, investigated by x-rays and in anatomical specimens, yet it is still closed, waiting, as it were for some one to say 'open sesame' To penetrate into the riches of the human body is probably more difficult than to reach a cherished treasure. But in these days, fact is often stranger than fancy. Much that only a short time ago seemed far beyond our reach has come closer, has been revealed. And the most amazing thing is that we no longer marvel at these new wonders. We take things in our strides as the common and the every day. Yet the common at times becomes the wonderous.

Man has taken to outer space. The time will come when he will break ground in the unexplored depths of the living cell. The knowledge that he will extract from this "bottom" of life will be dearer to him than all the wealth of the world, for it will bring to the sick and ailing the greatest of all treasures-youth, strength and health.

Surely, the time is not far off when will be doctors of health and not of disease. To be sure, this is the future, but it is already unfolding, heralded the spectacular advances of recent years".

Siddhas of TamilNadu found out a system of medicine based on a distinct unique culture with an earnest desire for the welfare of the entire humanity. This system has rich potential to add to the already existing knowledge of modern medical science which aims for health for all by 2000 A.D. *Siddhas* used as therapeutic agents, drugs of vegetable and animal origin and also metallic and other inorganic poisonous compounds. They adopted curious pharmaceutical processes to convert those substances into nontoxic and infallible therapeutic agents. Most of the drugs used by them are classified as bio-genic stimulators and adaptogenic agents. By strictly adopting their diet regimen and *yoga* practices the people in those days were completely free from both physical and mental disorders. That is, in those days the *Sidda* physicians were only doctors of health and thus they ensured health for all by 2000 B.C.

It is essential that the Bio-chemical mode of action of potent *Siddha* drugs used in *Siddha* therapeutics, should be investigated and the beneficial results thus obtained must be published in the intelligible scientific language, for incorporating them in the literature on

Cāṭṭaimuṉi ñāṉam, Saint Cāṭṭaimuṉi meticulously stated that *Pinḍam* is a microcosm. This fact wonderfully tallies with the findings of the twentieth century biological science.

Under humoral Pathology Dr Sadique states that the external air, external heat and external water correspond to *Vātham, Pittam* and *Kabam* respectively. This is not correct. *Vātham, Pittam* and *Kabam* are three biological forces. As long as they are in proper proportion, they maintain perfect health. Errors in diet, thought, word or deed will upset their equilibrium resulting in ill health. To speak about *nāḍi* diagnosis, prognosis, drug action, disease processes, line of treatment etc according to *Siddha* medical science, one must possess very thorough knowledge of 96 *Tattuvas* which constitute the basic ideas of physical and meta-physical aspects of the universe and being.

Dr. Sadique has correctly stated that the conversion of metals, inorganic poisonous compounds etc into *kaṭṭu, Kalangu, Parpam, Cendūram* etc. is possible only by such persons who are well versed and experienced in the art of pharmaceutical expertise propounded by *Siddhas*. He has aptly stated that the treatment of diseases is a complex affair and that should be entrusted to the experts in that field.

It is true that the modern medical science at present has no proper remedies for several diseases of obscure etiology. They are classified as auto-immune disorders and collagen disorders. They are chronic disabling disorders causing social and economic liability to country. *Siddha meteria medica* contains several effective drugs which will survey prevent, arrest and cure such disorders.

It is really surprising to know that *Siddhas* were fully aware of the necessity of trace elements such as copper, zinc, gold, silver etc for the healthy development of the body and mind. The present day medical experts describe them as enzyme promoters.

Dr. Sadique says that his concern is to use the most up-to-date methods of science in evaluating these remedies through inter disciplinary approach. He has already published eight research papers during 1983-84. They have been accepted by prominent research organisations in India and abroad and he has been invited for further discussion on them. They are the most reliable testimonials for his ability to carry on research in *Siddha* drugs to prove their mechanism of action at cellular and molecular level. He should be given all the facilities and encouragement to implement all his research programme shown in his project.

ANSWER by Prof. *J. Sadique*

The statement that the external air corresponds to internal *vāyu*, the external heat to internal *pittam* and external water to internal *Kabam* signifies that man is linked with the external world. This statement appears in Sampasivam Pillai's Dictionary:

anḍattil uḷḷatē pinḍam
pinḍattil uḷḷatē anḍam
anḍamum pinḍamum oṉṟē

This is by the *Siddha* Cattaimuni. So, the above statement supports the former one. But I agree that ***mukkuṟṟam (vaḻi, aḻal,*** and ***aiyam)*** represent biological forces involved in the functions of construction, protection and destruction respectively. Even it is a common experience that lunar and solar cycles affect the biological functions of living organisms. The link of these vital factors with external elements cannot be entirely ruled out. The wise suggestions of Prof. C.B. Manavalan will be taken up.

EVIDENCES FOR THE PHENOMENA OF EMERGENCE ALONG SOUTHERN TAMIL NADU COAST THROUGH REMOTE SENSING METHODS

V.J.Loveson and G.V.Rajamanickam

Introduction

Remote Sensing in Coastal studies helps to construct a strong background knowledge of the nature of Coastal landforms[1,2] and the potential activities of Geological agents involved.[3,4] Normally, within short times Coastal landforms undergo a rapid, and marked changes as they are exposed to very powerful Geological agents. Because of this nature, the studies made by applying Remote Sensing is quite satisfactory, as they are covering a quite larger area and also the same can be repeated frequently[5,6,7] leading to the facilities of updating the data. Remote Sensing Application aids scientists to recognise not only the structures of Coastal landforms but also the phenomena involved to create such features.[8,9] This paper, aims to explain the vital use of Remote Sensing Techniques in recognising some of the characteristic Coastal features which are the typical indicators of emerging nature of the Southern Tamil Nadu Coast.

Physiography

The coast between Mandapam and Kanyakumari has been taken for the present study (Fig.1), (7.44' to 9° 38'N and 77° 38' to 79° 22' E). The shoreline is found to spread to a length of 365 km. About eight small rivers which are less significant and two major rivers viz. Thamiraparani and Vaigai are carrying the drainage pattern of this area. This coastal area is particularly receiving some rainfall during North-east monsoon combined with retreating South West monsoon season (i.e. August to December) about 20-30 inches. During middle April to middle June, the area experiences a very hot and dry summer. Major coastal settlements are located in an alignment, parallel to the coastal configuration within an average distance of about 40-50 kms from the coast. Alternate rocky and sandy beaches along the coast are common. Swarms of tanks have been observed both in the northern and southern extremities of the study area. The coastal plain extending behind the sand dunes in the study area consists mainly of alluvial sediments.

Materials and Methods

To understand the emerging phenomena, a detailed Coastal Geomorphological Map has been prepared by adopting the following Remote Sensing Techniques.

False Colour Composite (F.C.C) Landsat Imagery (Band 4,5 & 7) of 1976 has been interpreted to

prepare a Coastal Geomorphological Map on the scale of 1:250,000. The resultant map was duly compared to Landsat Imagery (F.C.C., T.M. Band 2,3,&4) of 1986 and necessary corrections have been made.

Aerial photographs of 1972 have also been used to draw a Geomorphological Map, in the scale of 1:60,000 for certain areas where interesting features related to emergence have been noticed. In order to obtain, control on the land marks, the Topo-sheets of Survey of India have been utilized. Elevations of each land forms have been observed from the same Topo-sheets.

In order to get confirmation of ground truth, extensive field work has been undertaken.

To have a knowledge on background set up of the bathmetry in the nearshore area, Hydrographic charts have also been brought in for interpretation.

The Satellite Imageries have been obtained by the reflection of the electromagnetic radiations ranging in the zones of Radio waves to Gamma rays, from the earth's surface. However, the sensible effective range is considered to be the wave length zone of 10^{-6} to 10^{2} micrometer. These imageries have been interpreted by visual method. The standard classification of 64 shades to each colour has been applied here. The experience in delineating the kind of shades and the background of the area have been properly utilised on the colour shades during the identification of the features in the laboratory. The continuation of uniform intensity and shade or tonal variation has been taken into account to delineate a particular trend of a physical feature or lineament. Wherever, the indecision arises in demarcating the tonal variation, the ground truth has been brought to clarify the same. The observed features have been correlated with facts obtained through the Aerial photographs of the same region. Such photographs are interpreted from the differences noticed in the Stereoscopic displays.

Results and Discussions

The study has brought out many interesting features. Loveson & Rajamanickam[10] has prepared a Coastal Geomorphological Map (Fig.2) for this area but description of those features are far from complete. Ahmed[11] has described the Coromandel coast as the coast of submergence. However, if one takes a close observations there are many evidences not only historical but also the Geomorphological aspects betraying the possibilities of the emergence. For example, the ancient light house near Muttam is buried by the sand dunes and placed at present nearly two kilometer away from the shoreline.

Some of the following features displayed in the Geomorphological Map (Fig.2) have been explained: (i) Ridges, (ii) Back waters, (iii) Palaeo-channels, (iv) Spits and (v) Terraces.

In the map, all the above features have been recognised from the very well defined tonal variation, conjointly with its own peculiar and prominent characters in structure and appearance.

Ridges

Ridges are believed to be built by marine actions related to deposition along the coast.[12] As Kayals are significant in Kerala Coast (Ahmed,

1979), so the ridges in the study area. In the study area, the ridges are trending NE, i.e. parallel in disposition to the present coast.

The ridges can be recognised in the coastal areas between Tuticorin and Mandapam. This nature of possible occurrence of ridges may be continuing further south in the delta regions of Thamiraparani, but the occurrence is not recognisable in the imagery which may be due to the dissipation of energy under the thick cover of sediments deposited by Thamiraparani river. Further south, extending upto Kanyakumari the ridges are not observed. However, very significant well developed occurrence of ridges have been noticed between Mandapam and Valinokkam.

In that developed region about four or five major ridges have been recognised in Imagery. These major ridges along with alternatively placed swales may indicate marine regression. Each major ridges are associated with atleast two or three minor ridges. They are easily identified in the Aerial photographs. These may be attributed to the minor stages of local regression of the sea in this area.

It is noted that these ridges are equi-distant features. This nature suggests that the mechanism of marine regression in this area might have been achieved by definite time, magnitude and management of particular Geological agents or the definite stages of widespread tectonic movements acted in this area. At SW of Mandapam, the ridges are curved in disposition which suggests the nature of the basin i.e. a shallow one, during the formations of these ridges.

Mandapam to Tuticorin, the appearance of ridges are prominent. It is worth noting that this area might not have obtained any benefits from any of the rivers either by deposition or other activities. At the same time, the parallel disposition of these ridges clearly depicts that these ridges might have been due to the resultant effects of marine action of deposition and some tectonic forces acted in this area. It has also been observed that there is not much evidences for the possibility of the presence of ancient major rivers in this area, or otherwise these ridge formations would have been curtailed by them.

These ridges are composed purely of compact sand and shells along with small amount of lime as binding media, scaling about 6 to 8.5 meters. Layers of enormous sand deposition is provided alternatively with shelly deposits especially near Mandapam and Vethalai.

The ridge formation covers about maximum of 14 kms across landward from the coastline. Around Sippikulam the number of ridges are found to be lesser than the area around Mandapam, and also the pattern of such ridges are observed to be different from the curved disposition of Mandapam area. It may be attributed to the influence of palaeo-coastline configuration or shallowness of the shelf or due to effect of different directional magnitude of minor tectonism. The various stages of the development of these ridges, kinds of ridges and the different magnitude of the same, lead to think of the different times of the sea-level stand along this coast during the recent past.

Backwaters and Cut-off Tanks

In the study area, prominent Backwater zones have been recognised and they are situated almost parallel to the present day coastline configuration. There are two Backwater occurrences of which one lies between Vethalai and north of Kilakkarai and the other between Sippikulam and Kilmundal coastal area. These two occurrences are linear enough to follow the respective coastline configuration.

As compared to their length, the width is smaller spreading about 100-150m. Many branches of Backwater zones have also been observed and they are also dispositioned parallel to their respective main Backwater inlets during the phase of the regression.

Generally, during the phase of the regression of the sea, one finds many swales. When such swales are found to have still inlet from the main sea, that functions as the Backwater zone. In otherwords, most of the swales of last stage of regression have been provided with sea water inlet, so as to form the characteristic Back water zones. In turn, these Backwaters can be very well connected to the genesis of the ridge formation as the swales and ridges are usually alternate each other.

— As the Backwaters, located near the shore, have been receiving regular supply of sea water at high tide times, most of these Backwaters are connected to the silt supply, too. As it is getting supply of silt in high tide through littoral-currents, they get settled inside the Backwater zone and only sea water withdraws during low tide times. If this action prolongs constantly, there is every possibility for the Backwater regions to have been cut-off due to siltation. Likewise, numerous such cut-off Backwater tanks have been identified. Such type of Backwater tanks are noticed only at the northern part of the study area.

Apart from the nearshore Backwater tanks, numerous such tanks are observed in the interior especially in the regions situated, SW of Vaigai river. Most of them, when compared to fresh water, are saline in nature indicating the probable genesis through such marine cut-off tanks. Eventhough, they are somewhat parallel with the coastline, at the northern extreme of their region some diversion from north to NE disposition have been noticed. Such change in their linearity may be due to tectonic disturbances existed in the area[11] or by the inferred disturbances made by the Vaigai river, due to its change of course from SE to E.

There is another type of cut-off tanks which are not saline in nature, in the southern part of the study area close to river, Thamiraparani. Unlike the earlier, these are not parallel with coastline. In contrast, they are aligned with Thamiraparani river. As they are fresh water tanks, it may be considered that in this region the siltation or progradation leading to the closure of inlets might have been due to the river deposition than the marine activity. It is also inferred that emergence of higher intensity has been experienced by northern part of the study area rather than the southern part, because of the existence of large number of cut-off tanks, originated out of marine activities in the northern part.

Palaeo-channels

The presence of palaeo-channels have been recognised by their characteristic tonal variation. These are located mainly in northern part of the study area i.e., SW of Vaigai river. From the field work data, one is able to know one thing that is the significant presence of some fresh water cut-off tanks in this area. These channels' courses are indicated by the linear arrangement of the series of fresh water tanks which in turn, surrounded by salt water tanks mainly in the lower reaches of these channels.

Generally, two patterns of palaeo-channel arrangements have been recognised in the study area, one follows NW-SE trend at southern side whereas the other trends EW direction in the northern part. The Vaigai river is at present flowing in the trend of EW with the confluence at the Palk Bay. But there is every reason to believe that the palaeo-channels might have been occupied by the same river in the recent past, when it was flowing in NE-SW. Accordingly, it may be inferred that at earlier times the river might have occupied the present palaeo-channels of NW-SE trends confluencing into Gulf of Mannar.[13] But, in due course, it must have shifted its course, so us to attain the present day configuration. The disposition of this feature suggests that the change of patterns of palaeo-channels might have been resulted due to sea level variation and the tectonic movements. As the area is flooded with large amount of alluvium sediments, the channels have been buried. The presence of salt water tanks here and there in the lower reaches of the palaeo-channel, can be explained in such a way that the closure of those tanks must have been initiated due to the regression of the sea and subsequently, as the same tank could not get marine water contact they must have been transformed gradually into less saline. While the siltation is aggrevated due to regression the changes of river course must have been initiated by the tectonic uplift.

Most of the palaeo-channels have been found to get terminated at the ridge zone, and could not cross over any of the part of the present coastline. It suggests that the palaeo-channels must have been pretty old and they must have been formed before the formation of these ridges.

Spits

Presence of spits have been attributed commonly to movement and deposition of materials by long-shore currents.[14] The spits indicate the seaward progradation. In the study area, spit formation is noticed to be numerous along the coast. It is also observed that longshore currents in the study area are approximately having about 1.8 kts speed at Tuticorin. So, it is likely to pour enormous sediments along this coast.[15] In turn, these sediments have became the tool to produce spits then and there, where the favourable conditions occur or the coastline configuration changes.

An inactive spit is found at the mouth of small river at Manappad. Little past, this river might have been a major river. Because of this, the spit might have been developed or had facilities to bring enough sediment load to cause the quick deposition due to littoral currents.[10] This "Huge Dune Spit" rises about

10 to 12 meters above the sea level and purely consisting of white medium sand with lot of marine shells.

Further north, at Tuticorin, an interesting spit about 3.5 km long and 200-350 meters broad, is connected to the mainland in the south. It appears to have been built by the sediments brought by the long shore drift moving in the direction of south west mainly, under the influence of the south west monsoon. As the Gulf of Mannar is on the lee of the north east monsoon, there is no longshore drift from the north east that might cause the inward curving of this spit.[11] It can be explained that the Tuticorin spit might have been produced by the longshore currents' transportation of the sediments, discharged by Thamiraparani river under the influence of the monsoon. And also at Tuticorin coast, a shift in the configuration of coastline is noted from N-S to N 60° E. Because of such change in the configuration, change in the intensity and velocity of the transport capability of the littoral currents might have been retarded at these points to deposit the load of material brought even from a far distance mainly from south so as to form a spit. Over all, the quantum of sediments is so high that the sediments brought by the Thamiraparani river could not be removed entirely by the longshore currents in the respective season. As this spit is wider than the neck formed in the south, combined with the series of islands existing in the north of the spit, it characterises the feature of Tambole.

At Kilmudal coast primitive undeveloped spit formation of coarser sediments indicate that the fine sediments of the river are being transported further North by the littoral currents, which are found stronger here. The growth rate is very slow, due to lack of active siltation.

Another spit is seen at NE of Valinokkam and it is believed to have been aided by the promontary which is acting as a strong barrior of the currents encouraging the sediments deposition. In the study area, a fast growing spit formation has been found at Periapatnam. Eventhough, there is lack of river deposition around that coastal area, the fast growth is worth mentioning.[16] The change of configuration or the shallowness of the inner shelf might have induced the breaking of waves and currents, leading to the deposition of the littoral sediments. Such progradation must have activated the spit formation in the recent past and in turn, it must have aided the closure of the ancient busy port during 18th century.[17]

Further north, the lack of spit formation may be attributed to either to the straightness of the coast which discourages the deposition or to the gradual decrease of the velocity of longshore currents as they are coming with the protected shorelines or they don't get fresh load of sediments to carry further as the coast is fully made up of by compact beach rocks and coralline sediments.

Spits are the good indicator of the phenomena of emergence of progradation of the coast.[14] Accordingly as the study area is having appreciable amount of all kinds of spit formation all along this coast, it may be inferred that the study area may be experiencing the emergence or regression of sea. And,

it is also observed, that most of the spits just described are found to be still growing. It can be said that progradation oriented emergence is presently continuing in this area.

Terraces

The recognition of the occurrences of Terraces is marked by aerial photographic interpretation. The following places are provided with Terraces in the study area: Kanyakumari, Manappad, Tiruchendur, Therkkumukaiyur, Valinokkam, and Pamban north.[10]

These marine terraces depict the lowering of sea level along this coast and the height of sea level stand during the recent past. Among the granite exposures in the coast of Kanyakumari, one Terrace composed of sandstone is observed and it scales about 4 to 5 m height with the demarkation of three stages of Terrace.

At Manappad, Terrace formation is found within the compact dune formation. It consists of alternative calcareous sandstone and compact limestone bed along with numerous shells of molluscan family in both the types. About four stages of the Terrace is measured. The topmost sandstone stage is very tough because of the continuous lime cementation and the subsequent underlying Terrace rocks are found to be less hard. These formation is partly covered by the huge dune formation.

In Tiruchendur coast four Terrace stages scaling about 6 to 8 m height have been distinctly observed with clear demarkation. On the whole the Terrace formation is made up of calcareous sand stone. The variation within the four stages are only in the sand grain size. These Terrace rocks include large amount of shells of molluscan and pelycypods. Grooves of the living animals, noticed in the Terrace, suggest compactness and leaching property.

Calcrete Terrace formation at Therkkumukaiyur coast, consists of three stages, and is found to be tough and hard enough, even not to break by means of hammer. The sand particles have been cemented strongly so as to produce calcrete Terrace formation. Here, the presence of shells is completely absent..

At Valinokkam, compact sandstone Terrace showing three stages has been identified. Among the three, the upper and lower are less developed in contrast with middle one, which is alone reaching the height of about 2 meters. They are devoid of fossils and friable in nature..

Near the Light House of Pamban, a Terrace formation composed of sand and shells, having 0.75 to 1.5 in thickness is seen. Each has its own characteristic fossil assemblages and grain size variation.

Besides, Inland Terraces have been recognised at Pamban South Coast, Ervadi, Mandapam Camp, Vethalai, Thravaikkulam and dune Terrace at near Rameshwaram. These are quite inside at a distance of about 4 to 7 kms from the shoreline. These Terraces can be worked out to quantify the amount of withdrawal of the sea in the recent past.

Conclusion

The valuable tool of the ocean studies has been applied here for preparing the Coastal Geomorphologi-

cal Map of Southern Tamil Nadu. The Coastal features like ridges, back waters, palaeo-channels, spits and Terraces have been recognised. Significant ridge formation has been seen in the region between Tuticorin and Mandapam. It is observed that the Back water zones are commonly seen parallel to the coastline, configuration. Palaeo-channels, having two kinds of trends i.e. E-W and NW-SE, have been recorded and the same suggest the nature of siltation or sea level variation in the area. The typical progradation feature like spits have been noticed all along the coast. Pockets of marine Terraces with three or four stages have been traced all along the coast. The existence of these coastal features have been attributed to the predominant influence of the on-going progradation or the emergence of coast.

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(Maps & Figures next page)

Fig.1 Coastal Geomorphological Map of South Tamil Nadu, India

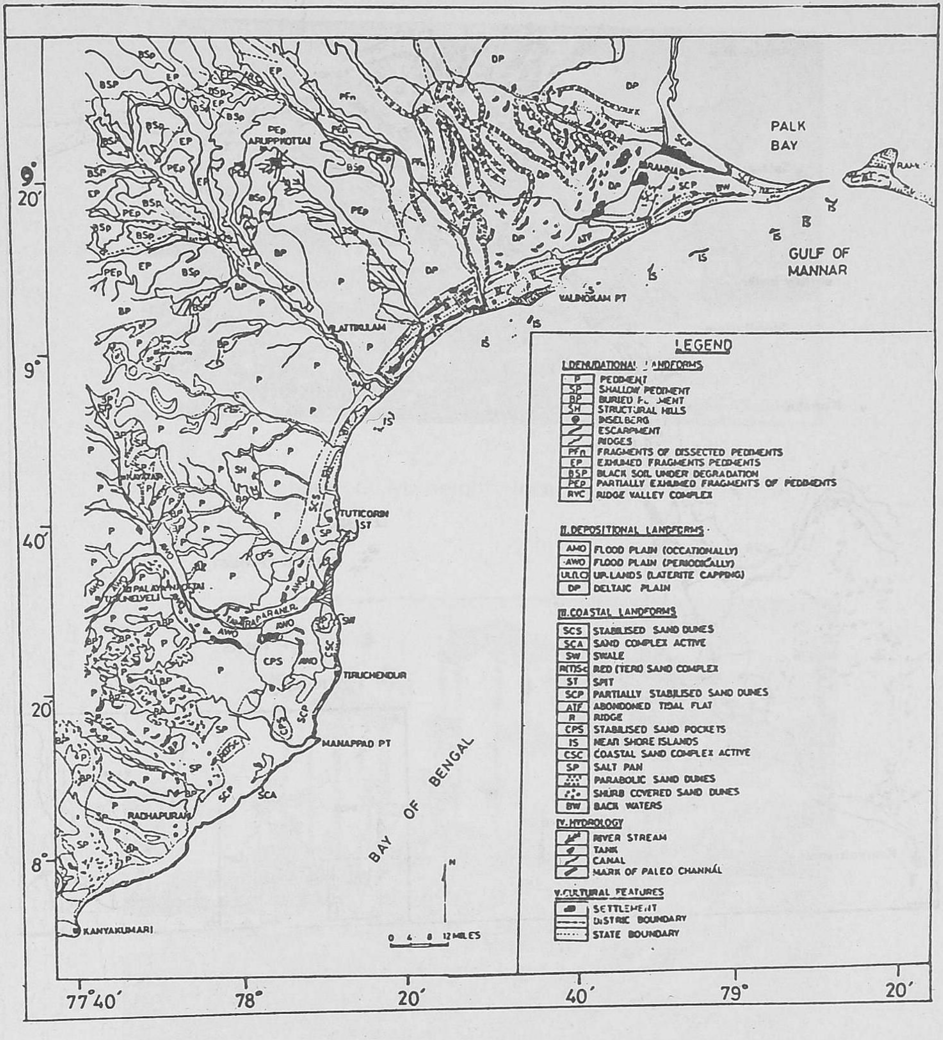


Fig.2 Map Showing Characteristic Features Like Palaeo-Channels, Ridges, Cut-off Tanks and Terraces

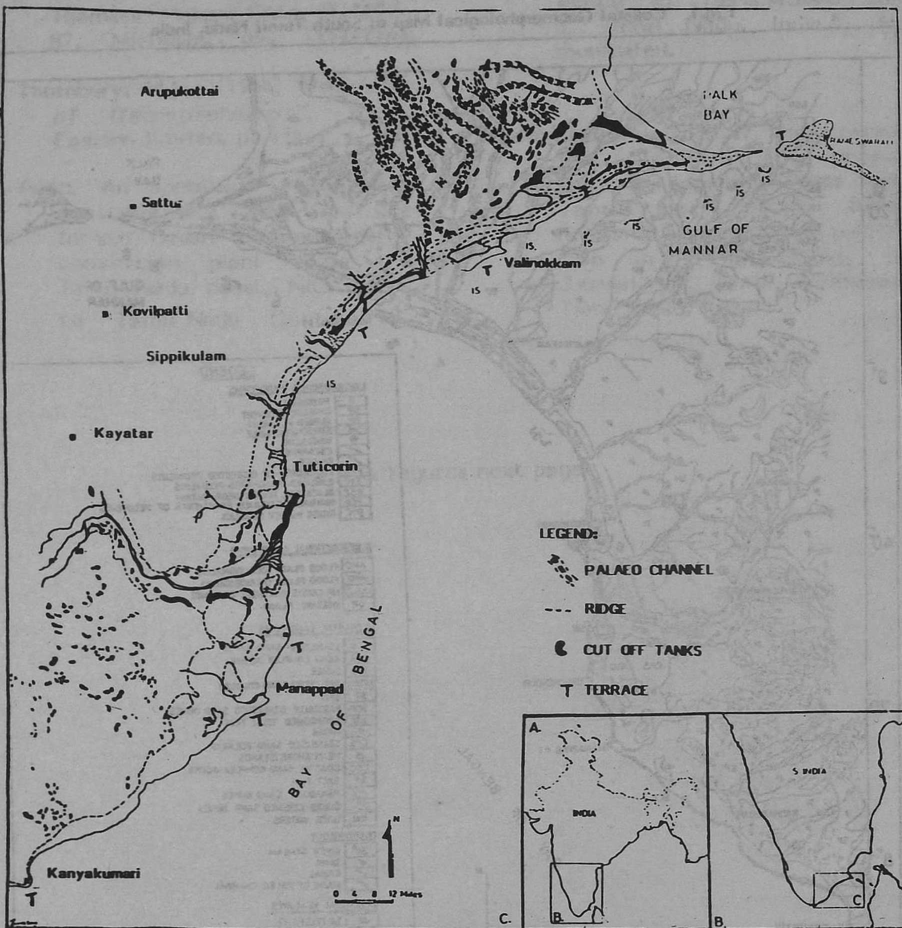
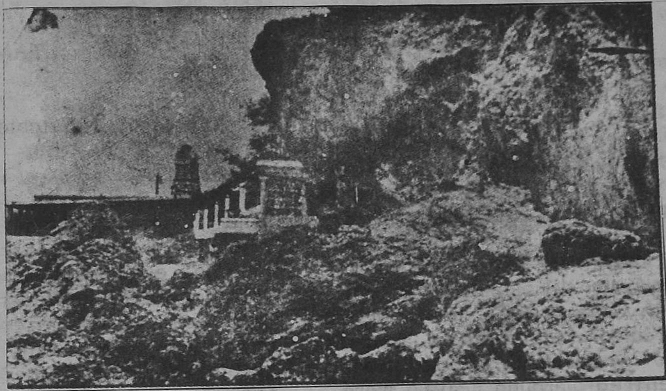


Fig.3 TERRACES



a.Terrace of about 6 M height located at Thiruchendur Coast



b. Terrace seen at Therkkumukkaiyur Coast

TAMIL MYSTICISM

K.Satchidanandamoorthy

In the Tamil-speaking areas from the middle of the sixth century the bhakti movement arose and continued vigorously till almost the end of the ninth century A.D. The leaders of the stream which centred around Viṣṇu were Āḷvārs and of the other which centred around Śiva were Nāyaṉārs. The first three Āḷvārs and the first Nāyaṉār may be assigned to about A.D.550. Nammāḷvār, the greatest, and his disciple the last Āḷvār belonged to the end of the eigth or the first half of the ninth century. The last Nāyaṉār was Sundaramūrtti of the later half of the seventh century. A century after him came Māṇikka-vāsakar, whose work also found a place in the Śaiva canon. The Vaiṣṇava canon received its definite shape in the ninth century; while the Śaiva one although compiled first in the tenth century went on receiving additions till about the middle of the twelfth century.[1] Among these Vaiṣṇava and Śaiva saints were Brāhmaṇas, Kṣatriyas, Śūdras, women and pariahs, including hunters and untouchables. Some of them were scholars, some unlettered; some were rulers, ministers, preceptors or friends of kings; others peasants, artisants, labourers and nomads; and atleast one was a mleccha (Kaḷḷar) and a dacoit before conversion. All their compositions were in Tamil. It is clear that to some extent, but not primarily or wholly, revolutionary opposition to the established order took the shape of Tamil mysticism, and positive material class interests inspired the bhakti movement. This is true in the case of all the bhaktas, yogis and tantrics of the middle ages, as it is in the case of the rsis and sramanas of ancient times.

The faith of these Tamil mystics as well as those of the Marāṭha saints devoted to Viṭhoba (Viṭṭhal) of Pandhārpūr was a unique personal monotheism and image mysticism. They all believed that God is one, transcendent (para) and immanent (antaryami), the supreme Divine Person, the omniscient, omnipotent, just and compassionate maker and ruler of the universe and lord of all beings. Nevertheless he actually abides in all his glory and power in the images at Tirumala, Chidambaram, Pandharpur and other places. Śrī Veṅkaṭeśvara at Tirumala and Naṭarāja at Chidambaram, who can be perceived by us, are not the symbols of Viṣṇu or Śiva, but actually God himself; so were the avatāras Rāma and Kṛṣṇa. In each case (e.g. in the Naṭarāja image at Chidambaram, as Kṛṣṇa, son of Vāsudeva, husband of Rukmiṇi and friend of Arjuna, and as the indweller in every being) God is present really, fully

and perfectly. The incarnation-form, the image-form and the indweller-form is as much God as the transcendent form in Vaikuṇṭha or Kailāsa. Some images (or lingas in the case of Siva) are self-born, while others were installed according to sacred rites by holy men, and in both God himself is fully present. They are not just representations of him. So concrete worship and service of these permanent incarnations (sāsvata avatāras) or adorable forms (arcarūpās) is as valuable as meditation (dhyāna) and sacrifice (yajña).[2] 'May I eternally serve the Lord at Tirumala' - was the ardent wish of the greatest of Āḻvārs,Nammāḻvār. 'At Tillai (-Chidambaram) dwells the First of all--and those who cleave for ever to his foot, no cleaving sin will grieve'--so sang one of the three greatest Nāyaṉāras, Ñāṉasambandar. Similarly, even for one of the four chief Maratha saints, Tukkārām, who declared that he abided in the Formless One and had his home in the Stainless One, the Inconceivable, God was really present as viṭṭhal, who, according to this bhakta, was 'our life, our ancestral God, treasure and spirit; -- the embodiment of our love; -- we have none but Him'. All these true bhaktas were aware of divine transcendence as well as divine omnipresence, and yet were convinced that just as the Supreme Person incarnated Himself as Rāma and Kṛṣṇa at particular places and times, He permanently abides as Veṅkaṭeśvara, Naṭarāja, etc., at different places to be concretely accessible to His faithful devotees.

An extraordinary thing we find in the Āḻvārs is their identifying themselves with and imitating the persons associated with Kṛṣṇa's life, e.g. the maidens of Bṛndāvan who madly loved him, Rādha, his beloved, Yaśoda, his foster mother, his boyhood friends, the cowherds, or his devotees like Draupadī and Vidura. They patterned their lives after those of the persons who were the lovers, parents, friends or devotees of God in human form. Earlier than this we do not find elsewhere a spiritual discipline of this sort. It received its full expression again the life of Caitanya (1486-1533) and its theoretical development in the literature of his school.

The woman saint Āṇḍāḷ's *Tiruppāvai* and *Tirumoḻi* and Nammāḻvār's *Tiruvāymoḻi* are great classics of bridal mysticism. Māṇikka-vāsagar's *Tiruvāsagam (Sacred Utterance)* is an outpouring of love for Śiva from a soul who fears him, clings to him, is 'filled in every limb with love's mad longing', because it was shown his beauty and was made his. Messages of love are sent to Śiva at Chidambaram through the king of bees and the cuckoo in his orchard. Another work *Tirukkōvai*, an erotic poem marked by devotional intensity and having as its main theme the soul's love for God, may also be most probably his. If *Tiruvāsagam* does not melt the heart of a man, so goes a common Tamil saying, nothing else can melt it. It is one of the most outstanding records of spiritual experience of the highest order.

The theology of the āḻvārs contains many novel doctrines such as the following. God loves man naturally, intensely and boundlessly; he is ready to help all who surrender to him completely and will bestow salvation of them whether they deserve or not. His grace is spontaneous and uncaused, and the only source of liberation; so all people will be emancipated in due course. Those

who have completely surrendered themselves to God need not follow the varnāsrama system (the order of caste and station in life) and need not perform any ritual or scriptural duty; they are avidhigocara (not within the ken of the obligations). Indeed surrender to God (prapatti) involves giving up varnasrama dharma. Liberation of souls is in the interest of God, as they are his servants, and as liberation is the restoration of their servitude to him. After totally relying on him there is nothing further a man has to do, for he will do the rest. Such a man need not expiate his sins, for God's grace will remove them. Irrespective of race, caste, education or social status, a bhakta is superior to everyone else, and is to be adored. All bhaktas are equal. Worship and love of adorable forms (arcarūpās) is the best type of spiritual activity. God is to be worshipped with joy and love. Sincerity, affection for suffering humanity, the feeling that all are one's own kin (atmiyata) and the translation of this into friendliness to all, including those who are crooked and inimical--these are the behavioural traits of a true devotee. With many of these ideas the nāyanārs are in agreement.[3]

Except the *Svetasvatāra Upanisad*, the *Bhagavad Gīta*, and some portions of the *Mahābhārata*, nothing in Sanskrit concerning bhakti can be said to be definitely earlier than the hymns of the alvars and the nāyanārs. Bhakti was born in Tamil country. 'Utpanna dravide', says the *Padma Purāṇa, Uttara Khāṇḍa*; Bhakti dravidupji, so runs a Hindi couplet. J. Filliozat showed to this to be historically correct.[4]

According to the *Śivadharmottara*, *āgamas* or siddhāntas were written in Sanskrit, Prakrits and desa-bhasas. Inscriptions of the seventh century refer to Śaiva Siddhānta. S.N.Dasgupta and T.P.Minakshisundaran have written that Śaṅkara in his Brahmasūtra Bhāsya refers to Siddhāntas, the followers of which were Īśvara-karanins, i.e. those who maintained that God is the instrumental cause of the world.[5] In his commentary on that bhasya Vacaspati (ninth century) mentions Karunikasiddhāntins as one of the sects among Maheśvaras. They are Śaiva siddhāntins who maintain the doctrine of divine compassion. It is out of compassion that God concealing himself from the souls repeatedly creates, sustains and dissolves the world to provide them an opportunity to experience and get the desires appropriate to their karmas, and to give them rest periodically, so that they are finally purified by their actions and devotions, when he reveals himself and liberates them through his grace. All that God, Lord of souls (Pasupati), does is out of boundless compassion (karuṇa) for them, for he is not only existence and consciousness, but also grace. The souls get liberated from bondage through knowledge of God obtained through God's grace. In the union of soul and God, resulting in supreme bliss, non-difference, a union-in-separateness (advaita), between the two is realized.[6]

Tirumandiram by Tirumūlar (ninth century) is the earliest work which contains some elements of Śaiva Siddhānta, which received its definitive formulation in *Śivañāna-bōdam* of Meykaṇdar, a Veḷḷāla (a śūdra caste) of the thirteenth century. His disciple Aruḷanandi wrote *Śivañā-ṇasittiyār*, a learned commentary on it, which is the great classic of this school. The *Periya Purāṇam* by Sekkiḷār, a Veḷḷāla of the twelfth

century, containing the lives of the nayanars, is considered to be a great classic in Tamil and the fifth Veda, and is included in the canon. It has deeply influenced the religious life of Śaivas throughout South India. Umāpati Śivācārya (c.1290-1320) wrote eight treatises (śāstras) on Śaiva Siddhānta. Depending on his works, later Bhandara Śāstras were produced in which were described stages of spiritual experience culminating in the vision of God (Śivadarṣana), communion with him (Śivayoga) and enjoyment of him (Śivabhoga).

Tirumūlar considered every man, in whom God dwells, is a mobile temple and so service of man is divine service. As God is one, mankind is one family; all men are brothers, he maintained. Worship of God should lead to seeing him everywhere, said Mevkaṇḍar. According to a great nāyaṉār Appar, a Vellāla who was a contemporary of the Pallava King Mahēndravarma I (reign 580-630), God is the essense of dharma rooted in daya (compassion). For another nayanar Sundaramūrtti, domestic life is spiritual communion in the service of God and man. He sang about a divine democracy based on universal love and service. Arulanandi declared: 'They have no love for God who have no love for all mankind'. The message of *Periya Purāṉam*, which so much inspired Ramaṇa Maharshi, is that constant unselfish service of human beings should be the ideal of life, as it leads to salvation.

G.U.Pope, who translated Māṇikka-Vāsagar's great work, and was a pioneering western scholar of Śaiva Siddhānta, considered this system to be 'the most elaborate, influential, and undoubtedly the most intrinsically valuable of all the religions of India'. On the literature of this school Sir Charles Eliot commented: 'In no literature with which I am acquainted has the individual religious life--its struggles and dejections, its hope and fears, its confidence and its triumph--received a delineation more frank and more profound'. 'No cult in the world', L.D. Barnett concluded, 'has produced a richer devotional literature, or one more instinct with brilliance of imagination, fervour of feeling and grace of expression'. A more recent scholar R.C. Zaehner was in his last years more or less equally enthusiastic about this school of Tamil theism.

TAMIL COSMOPOLITANISM

From where did some of these Bhakti saints get the concept of human equality and brotherhood? One answer could be from their own religious consciousness. Their firm-faith in and experience of One God might have logically led them to the conclusion that as all are his servants or children (as their hymns assert), all are fraternally equal; and that therefore caste is a myth. Another answer is that they derived this from their ancient Tamil tradition. In *Puṟanāṉūṟu*, a poetic anthology of the Śaṅgam age (the first three or four centuries A.D.), there is this poem (no. 192) of Kaṉiaṉ Pooṅguṉṟaṉār: 'All places are similar to me; all are my kith and kin. Suffering and freedom from it are of similar nature; death is not something new. Life is neither all sweetness and joy, nor all misery. The plight of our precious soul tossed in the torrent of fate is like that of a raft in the middle of a mighty river in floods, rushing along knocking against rocks and boulders. Having learnt this truth from the teachings

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of great scholars, I do not either esteem the highly placed or despise the lowly'. Here for the first time in Indian literature we find a clear assertion of the equality of all people and lands. No race, nation or class is superior to others and no country town or village is sacred; life is neither wholly joyous, nor miserable. The Śaṅgam literature idealized love and glorified domestic life based on it. The ideal of such a life ought to be to work for others and attain perfection. The *Tolkāppiyam*, a grammatical work of the same age, mentions only three ends of man; dharma, artha and kama. The Śaṅgam literature held that to lead dharmic life for the sake of heaven is to commercialize the former, while the right thing is to do so for the sake of perfection. To be perfect is to be wise, cultured, loving and socially beneficial. To be eminent is to successfully perform one's duty, overcoming all difficulties. A Śaṅgam poet Māṅkuti Marutaṉār advised rulers to realize the impermanence of things and value peace and usefulness to others as much as fame and grandeur. It was perhaps from this Tamil humanism of the Śaṅgam age as much as from their spiritual experience that the Vaisṇava and Śaiva bhaktas got their conception of equality and human brotherhood.

KURAL ETHICS

I must not fail to mention the justly famous *Kuṟaḷ* of Tiruvaḷḷuvar (A.D. 450-550), which presents an integrated philosophy of life. Tiruvaḷḷuvar was probably either a Jaina or a secular humanist. He too mentions only three ends for man, but includes under dharma the path going by which one does not return to the world, which consists in renouncing the feeling of 'I' and 'mine' and developing universal love. Lauding domestic life based on love, he exhorts extension of the latter by stages, to include first one's spouse and children, then others in the family, then neighbours and so on till it becomes almost universal. Finally, one must be ready to help whosoever needs it, irrespective of relationship or any other consideration. Real fame consists in achieving something permanent, which will make one in a way eternal even after death. Tiruvaḷḷuvar, while dealing with politics, emphasizes that both ends and means must be always ethical. Like Nāgārjuna, he also does not advocate apadharma (the dharma of expediency) under any circumstances. No one, he thinks, is destined to be poor, because individual effort along with social change can make everyone prosperous and happy.

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24A.

DR.S.RADHAKRISHNAN'S CONTRIBUTION TO INDIAN PHILOSOPHY

J.Rangaswami

Among the philosophers, Critics, Creative Thinkers, System-Builders who brought out the ancient wisdom within the purview of the modern science and rational thinking of India, Dr. S. Radhakrishnan stands next to Mahatma Gandhi and Tagore. His erudite scholarship, brilliant interpretation, clear thinking, lucid explanation made him a great thinker, best teacher, good administrator, a successful diplomat. A critical perspective of some of his views in Indian Philosophy and their application may be relevant to study.

1. His interpretation on Shankara's *Māyā* theory as real and unreal with respect to *Brahman* stands foremost. He envisages the concept and critically reiterates into three ordered ways:

(i) Apparent Reality *(Prātibhāsika Sattā)*:

Within the individual perspectives, certain ideas are real only for sometime but the same will be sublated. For example dream is real when it lasts it becomes unreal. This kind of reality will differ from person to person and purely private.

ii. Empirical Reality *(Viyāvahārika Sattā)*:

The world of every day experience is more real. It lasts till one realizes *Brahman*, the ultimate reality.

iii. Absolute Reality *(Pāramārthīka Sattā)*:

When the individual attains pure knowledge he realizes that *Brahman* alone is real, the world is unreal and the selves are nothing but *Brahman*. Dr. S.Radhakrishnan states that the *Advaite* concept that in the *nirguṇa* state, the supreme *Brahman* is real but has no qualities. It is static. The same *Brahman* in the *saguṇa* state as *Iśvara* possesses countless qualities through His *māyā-sakti*. It is dynamic Shankara epistemologically describes the static

and dynamic states of *Brahman* by *anivacaniya khyāti*, in which the reality appears as real but disappears when the individual attains the true knowledge. While explaining this, Dr. S. Radhakrishnan vehemently differs from Shankara and states that both the *nirguṇa* and *saguṇa* states must be equally real. The world will have a meaning, if it were the creation of God, the *Saguṇa Brahman*. In this respect Dr. S.Radhakrishnan rightly describes the world as "unreal the world is; illusory it is not."[1] This is because Dr.S.Radhakrishnan endows the world of *māyā* which is God's power with a positive reality, though it is not eternal.

2. Regarding the vamashrama-dharma, Dr. S.Radhakrishnan looked into the traditional problem and rightly analysed the class and caste concept in his commentary on the *Bhagavad Gītā*.[2]

He states,

> "the four-fold order is designed for human evolution. There is nothing absolute about the caste system which has changed its character in the process of history. Today it cannot be regarded as anything more than an insistence on a variety of ways in which the social purpose can be carried out. Functional groupings will never be out of date and as for marriages they will happen among those who belong to more or less the same state of cultural development. The present morbid condition of India broken into castes and sub-castes is opposed to the unity taught by the Gita which stands for an organise as against an atomic conception of society.[3]

He commends the traditional view and emphasizes a new derivative to suit the current society."

3.Dr.S.Radhakrishnan's political philosophy is unique. Through his political views he wants to formulate an integral spiritual world community. He does this by changing the basic concepts of the individual state, human personality, equality, freedom and democracy. As for the individual, he declares that he has to achieve the completeness of being by vigorous discipline of mind by developing a chastity of spirit which should transcend the boundaries of nation, race etc.,[4] As for the state, he emphasizes that the man should realize the spiritual freedom in the society.[5] In order to develop the unified human personality, an individual's inward and outward variations must cohere and go together.[6] Everybody should practice the fraternal affection look upon all people as children of the Supreme and there could not be any real distinction between one race and another or one nation and another.[7] Democracy is a

system where the inward light or the light which dwells in the inmost being of man should be governed by the life of others in the world community.[8] Through this the world will become one and there will not be any problem racial or national. Regarding the 'World Community' he says as follows:

> "In spite of sharp internal conflicts and setbacks, mutual slandering the world is getting to one. Science knows no borders. Art and culture are becoming common possessions. The isolated existence of human groups has become outdated. It is only a matter of hours to travel from one end of the world to another. Radio, Television and the Press help us to follow events in other countries. Physical barriers have broken down, preparing the way for intellectual communication and spiritual communion. The most distant states have become neighbours and an international society is in prospect. The world is drawn together by the interconnectedness of the world community."[9]

Dr. S. Radhakrishnan is not a mere utopian visionary but points out the practical possibilities of attaining it.

4. Now to turn to. Dr. S. Radhakrishnan's concept of intellect and intuition, he putforths a view by which an individual immediately and directly experiences the ultimate reality as against laboured reasoning. By the intellectual faculty of sense experience and discursive reasoning, man understands the world and its qualities through the pursuits of the natural sciences and he controls and manipulates the environment by means of logical and conceptual knowledge.[10] But by intuition on the contrary one can directly through integral experience gain the knowledge of the absolute reality. Intuition according to Dr. S. Radhakrishnan comprehensively includes the intellectual realm and it moves upward to the mystical experience and downward to reason and sensation.[11] This faculty of spiritual super-consciousness exists over the animal and self-consciousness and through which the individual is aware of the spirit of the reality.[12] Thus Dr. S. Radhakrishnan combines the views of science and philosophy and out of it an universal epistemological outlook is enunciated.

5. Dr. S. Radhakrishnan talks about the purpose of history. The kindgom of God, a society of saved souls is the cosmic destiny. The world is one expression of the absolute but not the Absolute itself.[13] The world process will continue untill the all souls get final liberation. The cosmic process will be continued until the last man is saved from the process.

6. Dr. S. Radhakrishnan talks about the realized souls or *Jivan muktas*. They do not remain isolated from the social obligations but engage in action to spread wisdom to all mankind. It is possible to question the practicality of the idea but Dr. S. Radhakrishnan says that a faith in it could result in the better humanity.[14] Dr. S. Radhakrishnan has the opinion that the persons, who attained to realise know the truth but in compassing the souls which are all struggling.

7. In fine, it is clear that Dr. S. Radhakrishnan interprets the traditional views so that they assume relevance to the present day humanity.

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